



Digitized by the Internet Archive
in 2014

<https://archive.org/details/b19974760M3305>

The
CHEMIST AND DRUGGIST
for RETAILER - WHOLESALER - MANUFACTURER

Established 1859

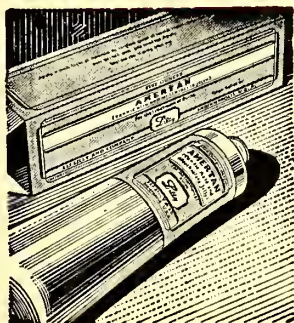
28 Essex Street, Strand, London, W.C.2

Registered as a Newspaper

No. 3164
VOL. CXXXIII

SEPTEMBER 28, 1940

Annual Subscription (with
Diary) 25/- Single Copies 9d.



AN OUTSTANDING LILLY PRODUCT

'AMERTAN'

TRADE MARK

BRAND

Tannic Acid Compound Jelly

A CONVENIENT PREPARATION FOR
THE TREATMENT OF BURNS BY
THE TANNIC ACID METHOD

IN ONE OUNCE AND FIVE OUNCE COLLAPSIBLE
TUBES AND ONE POUND GLASS JARS . . .

ELI LILLY AND COMPANY LIMITED
BASINGSTOKE, HANTS.

TELEPHONE: BASINGSTOKE 800.

TELEGRAMS: LILLY, BASINGSTOKE

AQUAE AROMAT. CONC.	-	Full strength, stable, does not require filtering
CATAPLASM KAOLIN	-	Maximum therapeutic value due to high anhydrous Glycerin content
EXT. CASC. SAGR. LIQ.	-	From mature bark
EXT. GLYCYRRH LIQ.	-	Strictly B.P. manf.
INF. GENT. CO. CONC.	-	Full odour of fresh peel—free from deposit
INF. CALUMB. CONC.	-	Bright, and remains bright on standing
HOUSEHOLD EMBROCATION	-	Effective, does not spill on application
PIL. FERR. CARB.	- -	Non-cracking, iron content does not deteriorate
SYRUP, EASTON'S	- -	Always freshly made, maximum keeping properties
SYR. HYPOPHOSPH. CO.	-	Brilliant, free from deposit
SYR. GLYCEROPHOSPH. CO.	-	Brilliant, stable colour, fine flavour
SYR. FERR. PHOSPH. CO.	-	Full Salts content, yet stable and brilliant
TINCT. NUC. VOM.	- -	Non-opalescent, retains clarity
UNGUENTA	- - -	Milled, smooth, cold filled

BULK DRUGS

DISINFECTANTS

TOILET PREPARATIONS

PACKED PHARMACEUTICALS



"A Reputation that is sound and enduring is more valuable than a passing success however spectacular, and it cannot be built up in a day."
For 50 years a policy of supplying only the finest pharmaceutical preparations at reasonable prices has been consistently maintained.

SOUTHWARK

LONDON

A DUTY TO THE NATION !



In these difficult times, pharmacists will be more than ever anxious to encourage the use of products of British manufacture.

With this in view, a wide range of British preparations, the high standard and reliability of which have been amply demonstrated, are presented for the attention of the pharmaceutical profession by

MAY & BAKER

★**DAGENAN — M & B 693**★

For pneumococcal, gonococcal and meningococcal infections.

★**SOLUSEPTASINE**

For parenteral administration in streptococcal infections.

★**MYOCRISIN**

For the gold therapy of rheumatoid arthritis.

★**GARDENAL**

For epilepsy.

★**RUTONAL**

For epilepsy

★**SONERYL**

For insomnia.

★**SONALGIN**

For insomnia associated with pain.

★**S.V.C.**

For trichomonal vaginitis.

★**CYCLONAL SODIUM**

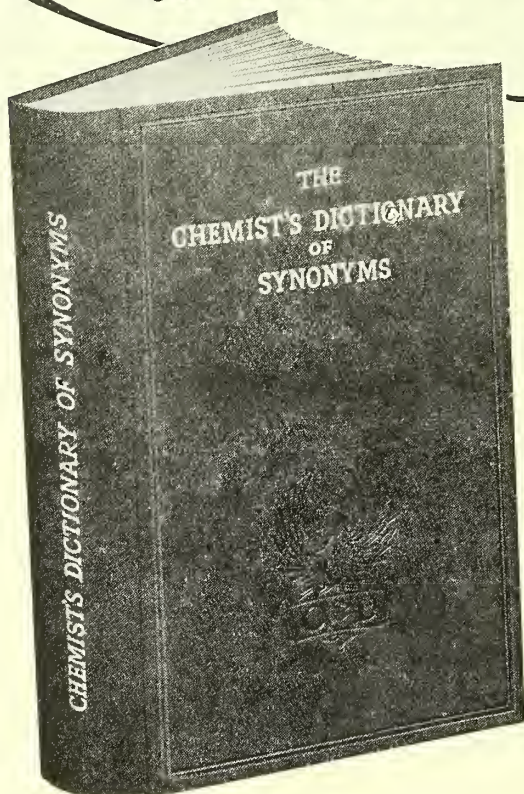
For intravenous anæsthesia.

★Trade Mark

PHARMACEUTICAL SPECIALITIES (MAY & BAKER) LTD. DAGENHAM



Announcing an addition to the 'Chemists' Library' Series —



A New Edition of **THE CHEMIST'S DICTIONARY** of **SYNONYMS**

Incorporating
ROUSE'S SYNONYMS

"for the use of Chemists, their Assistants
and Apprentices"

IS NOW AVAILABLE

Rouse's Synonyms has been a household word in the drug trade for generations, and "The Chemist's Dictionary of Synonyms" has rendered useful service to many thousands of chemists for a long period of years.

Both these books have been "out of print" for a considerable time, and since the last editions were published many terms have become obsolete and several others have arisen. The new edition, which is now available, contains the best features of both volumes. Containing thousands of synonymous terms, it covers a larger area and is more complete than any hitherto published.

One of the peculiarities of the Drug Trade is that most drugs rejoice in several names. Usually the greater the demand the greater number of names under which it strives to hide its identity.

No other book contains such a wide selection of technical words of this kind. It will be found to contain all that is likely to be required in daily pharmaceutical practice.

This book is of practical value to "Chemists, their Assistants and Apprentices," because it gives useful information often required in a hurry—and it eliminates the possibility of error. A copy should be in YOUR possession

Fill in the attached coupon NOW and secure your copy at the present low price.

PRICE **5/-** POST FREE **5/4**
THE CHEMIST AND DRUGGIST
28 ESSEX STREET STRAND, LONDON, W.C.2

TO THE PUBLISHER

THE CHEMIST AND DRUGGIST

28 ESSEX STREET, STRAND, LONDON, W.C.2

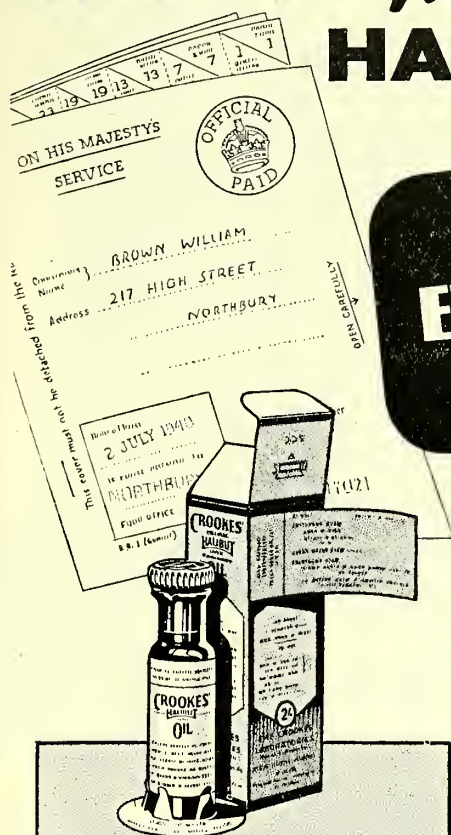
Please forward me a copy/copies of **DICTIONARY OF SYNONYMS** for which I enclose remittance value _____ herewith

AFFIX SLIP LABEL

NAME _____

ADDRESS _____

STOCK UP *Now* FOR THE HALIBUT OIL SEASON



**RATIONING WILL CREATE
EVEN BIGGER DEMAND
THIS WINTER**

THE rationing of margarine as well as butter — with its consequent restriction of essential vitamins — will make this winter a bigger Halibut Oil Season than ever. There is an urgent need for new, unrestricted sources of the essential Vitamins, and more people than ever are turning to Crookes' Halibut Oil, one of the richest sources of the natural Vitamins A and D. Crookes' Halibut Oil is 80 times richer in Vitamin A and 30 times richer in Vitamin D than fine cod liver oil. Tell your customers about it — modern housewives understand Vitamins and their importance in maintaining family health.

EXTRA 2½% BONUS

CROOKES' WAR SAVINGS CERTIFICATE EXTRA BONUS SCHEME

An extra bonus of 2½% — payable in National Savings Certificates — is now available to chemists who are supporters of the Chemists Friends Movement and who hold or will buy at least one Certificate. Write to us for details.

LARGE NATIONAL ADVERTISING CAMPAIGN WILL BUILD SALES FOR YOU

We are launching a big national advertising campaign emphasising the need for vitamins to counterbalance the effects of rationing. Our advertising this season will show how the vitamins in Crookes' Halibut Oil take the place of the vitamins in rationed butter and margarine. The demand this winter should build big sales for you — study our bonus terms and let us have your order now.

CROOKES' BONUS TERMS

Offered in return for displays

ORDER	DISCOUNT	BONUS
6 doz.	25% and 10%	2 per doz.
3 doz.	25% and 10%	1 per doz.
1 doz.	ORDINARY	1 per doz.

Crookes' Halibut Oil

GUARANTEED AND STANDARDISED VITAMIN CONTENT

THE CROOKES LABORATORIES (British Colloids Ltd.) PARK ROYAL, LONDON, N.W.10
Telephone: Willesden 6313 (5 lines)

Telegrams: Collosols, Harles, London

T.G.S.

K K

Kerfoot

Another cold is going...going...gone!



K K

THOMAS KERFOOT & CO. LTD.
Vale of Bardsley · Lancashire

BARTLETT'S

ANTI-BLAST

Ear Protector

(WILL NOT SOIL OR WEAR OUT)

A Bartlett Product

SCIENTIFICALLY CONSTRUCTED FROM RUBBER AND WOOL TO PROTECT THE EARS AND NEUTRALIZE LOUD NOISES AND BLAST.

EASY TO FIT AND REMOVE. CAN BE USED DURING SLEEP. SEND THEM TO YOUR FRIENDS IN THE SERVICES AND KEEP THEM HANDY YOURSELF.



Neutralizes..

LOUD NOISES and BLAST

6^d PER PAIR

HYGIENIC · COMFORTABLE · AND MOST EFFECTIVE



This product has been constructed to have all the BEST points an Ear Plug should have SCIENTIFICALLY and MATERIALLY. It is one of the types of devices recommended to the Public by Lord Horder, President of the Noise Abatement League, in his hints drawn up on how to protect yourself from the noise of Bombs, Blast and Gunfire.

THE RIGHT LINE WITH A BIG DEMAND AT THE RIGHT PRICE

Obtainable from your usual Wholesaler at 4/- per dozen on attractive cards of one dozen.

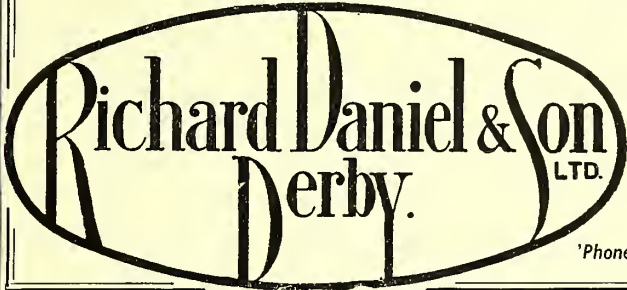
Sole Distributors :

ALFRED FRANKS & BARTLETT CO., LTD.
36/37 HATTON GARDEN, LONDON, E.C.1

INDEX TO ADVERTISERS

Acton Pill & Tablet Co., Ltd.....	vi	Cox, Arthur H., & Co., Ltd.....	8	Gardner, W., & Sons (Glos.), Ltd.	xi
Albro Fillers & Engineering Co., Ltd.	xi	Crookes Laboratories (British Colloids, Ltd.).....	3	Guest, Thos., & Co., Ltd.....	12
Allen, Stafford, & Sons, Ltd.....	9	Cross, J. E., & Co.....	10	Hall, Forster & Co., Ltd.....	viii
Armstrong Cork Co., Ltd.....	x			Haller Laboratories, Ltd.....	12
		Daniel, Richard, & Son, Ltd.....	5	Hampden Residential Club Col. Supp.	
Bayer Products, Ltd.....	i	Davenport, J. T., Ltd.....	iv	Harrison, A., & Sons, Ltd.....	viii
Beatson, Clark & Co., Ltd.....	x	Duke Pharmaceutical Co., Ltd.....	viii	Harvey & Co. (Dublin), Ltd.....	vi
Bell, John, Hills & Lucas, Ltd.				Howard, Lloyd & Co., Ltd.....	ii
Berton, Arthur, Ltd.....	viii				
British Cod Liver Oil Producers (Hull), Ltd.....	vii	Eueryl, Ltd.....	10		
British Thomson-Houston Co., Ltd.	8	Evans Sons Lescher & Webb, Ltd.	iv	International Laboratories, Ltd.	6
Burrough, James, Ltd.	Leader Page	Everett, S. & R. J., & Co., Ltd.	viii	Jeffreys, Miller & Co., Ltd.....	v
Burroughs Wellcome & Co.....	15			Johnson & Sons, Manufacturing Chemists, Ltd.....	iii
Calders Yeast Co., Ltd.....	12	Fairchild Bros. & Foster, Inc.	Leader Page		
Calvert, F. C., & Co., Ltd.....	5	Franks, Alfred, & Bartlett Co., Ltd.	4	Kerfoot, T., & Co., Ltd.....	4
		Freudentheil, Smith & Co.	Leader Page		

(continued overleaf)

<p>MANUFACTURERS OF</p>  <p>Richard Daniel & Son Derby. LTD.</p>	<p>TABLETS & PILLS</p> <p>IODISED THROAT TABLETS CHEST AND LUNG TABLETS AND ALL WINTER LINES</p> <p>'Phone: DERBY 4266/7/8 'Grams: "DANIA" DERBY</p>
---	--



CALVERT'S

TOOTH POWDER

- for Carefree Teeth!

Leath & Ross Laboratory..	vi	National Glass Works (York), Ltd.	xii	Sharpe & Dohme, Ltd.....	ix
Lilly, Eli. & Co., Ltd.	Front Cover	Newball & Mason, Ltd.....	vi	Simpkin, A. L. & Co., Ltd.....	iv
Liverpool School of Pharmacy....	x			Suter, A. F. & Co., Ltd.....	iii
London & Provincial Factors, Ltd.	10	Oxo, Ltd.....	iv		
London College of Pharmacy	Col. Supp.			Thackray, Chas F., Ltd.....	vi
		Pharmaceutical Specialities (May & Baker), Ltd.....	1	Tyrer, T., & Co., Ltd.....	ii
		Porteus, Geo., & Sons (Leeds), Ltd.	vi	Varkoff Proprietaries (1940) Ltd.....	vi
Manesty Machines, Ltd.....	14	Potter & Clarke, Ltd.....	16	Viseose Development Co., Ltd.....	x
Matthews & Wilson, Ltd.....	iii				
Maw, S., Son & Sons, Ltd.....	11	Ransom, Wm., & Son, Ltd.....	7	Washington Chemical Co.	Leader Page
Mehta Bros.....	ii	Rendell, W. J., Ltd.....	13	White, J. F., & Co., Ltd.....	ii
Monsanto Chemicals, Ltd.....	Cover iii	Roberts' Patent Filling Machine Co., Ltd.....	xi	Wilson & Mansfield, Ltd.....	ii
		Rozalex, Ltd.....	12	Wright, Layman & Umney, Ltd.	Cover ii
Napp, H. R., Ltd.....	Leader Page				
National Association of Opticians	Leader Page	Scurr, C. A.....	Col. Supp.	Zeal, G. H., Ltd.....	viii

More Coughs and Colds than ever —a grand chance for Parmint!



Damp shelters are bound to mean a great increase in coughs and colds. Get ready to supply the demand. Especially look over your stocks of Parmint, for this grand old remedy has already started its advertising.

Sugar shortage is not going to affect its sales. The new advertising features its use with 3 or 4 teaspoonfuls of Black Currant or other jam, honey, fruit syrup—all sorts of things handy in every home, some of them even more efficacious than sugar.

Don't miss the demand when it starts. Remember deliveries are often delayed.

PARMINT

DOUBLE-STRENGTH

1 oz. makes $\frac{1}{2}$ pint

INTERNATIONAL LABORATORIES LTD., 1-3 SMEDLEY ST., LONDON, S.W.8

EXTRACTS

**TINCTURES RESINOIDS
OLEO-RESINS MEDICINAL RESINS**

CHLOROPHYLL

OIL, WATER, SPIRIT

ALSO

CHLOROPHYLL MEDICINAL

(SUITABLE FOR TABLETS)

WILLIAM RANSOM & SON

ESTABLISHED 1846

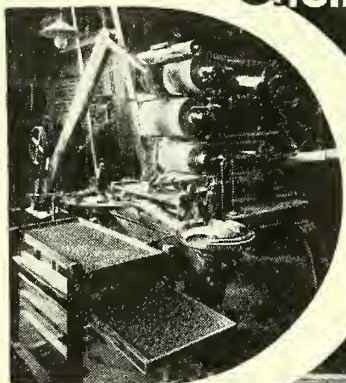
Ltd.

Manufacturing Chemists

HITCHIN near LONDON

PRIVATE FORMULA WORK

Pills and Tablets
manufactured under the control of
Analytical and Qualified
Chemists



ONE OF OUR
MODERN
LARGE-
SCALE
PILL
MACHINES

BELOW:
SECTION OF
DISPENSING
DEPT.

**Coated
or
Uncoated
Bulk
or
Packed**



SECTION OF OUR BOX-MAKING AND

SHOW-MATERIAL
DEPT.

COX *Estab. 1839*
ARTHUR H. COX & Co. LTD.
BRIGHTON

SAVE BY USING

MAZDA

**COILED-COIL
LAMPS**

They give up to
20% MORE LIGHT
 for the same current
 or the same light
 for less current



3873

MADE IN ENGLAND BY THE BRITISH THOMSON-HOUSTON CO.
 LTD., CROWN HOUSE, ALDWYCH, LONDON, W.C.2,



The Standard of Reliability

StaffAllens

CHLOROPHYLL
QUASSIN • ARBUTIN • ALOIN
EUCALYPTOL
ROTENONE • ISO-EUGENOL
SCAMMONY RESIN

**SAMPLES
AND PRICES
ON
REQUEST**



StaffAllens

STAFFORD ALLEN & SONS LTD
WHARF ROAD, LONDON, N.1 • Phone CLErkenwell 1000 (7 lines)

AS LONG AS WOMEN ARE WOMEN



Yeast-Pac PRODUCTS WILL BE STEADY SELLERS

The women of Britain have rallied magnificently to this country's war effort. *But they are still women.* The desire to keep their skins fresh and lovely is as strong as ever—stronger indeed: since many have had to accustom themselves to new and trying conditions. That's why YEAST-PAC Products are steady sellers. Here's a sure, safe—above all, an exceedingly *economical*—method of bringing new beauty, new activity to skin and pores. They freshen and revitalise tired complexions. They're the perfect answer to your customer's war-time beauty problems.

YEAST-PAC BEAUTY MASK

YEAST-PAC FOUNDATION CREAM

YEAST-PAC BEAUTY SOAP

6d. each retail

DISTRIBUTORS:

J. E. CROSS and Co., Diana Place, Euston Road, London, N.W.1



THE BLADE THAT MAKES YOUR FACE SMILE!

NOW an All-British product

Obtainable through your usual Wholesalers
TRADE ENQUIRIES INVITED

LONDON & PROVINCIAL FACTORS, LTD.
146 THEOBALD'S ROAD - - LONDON, W.C.1



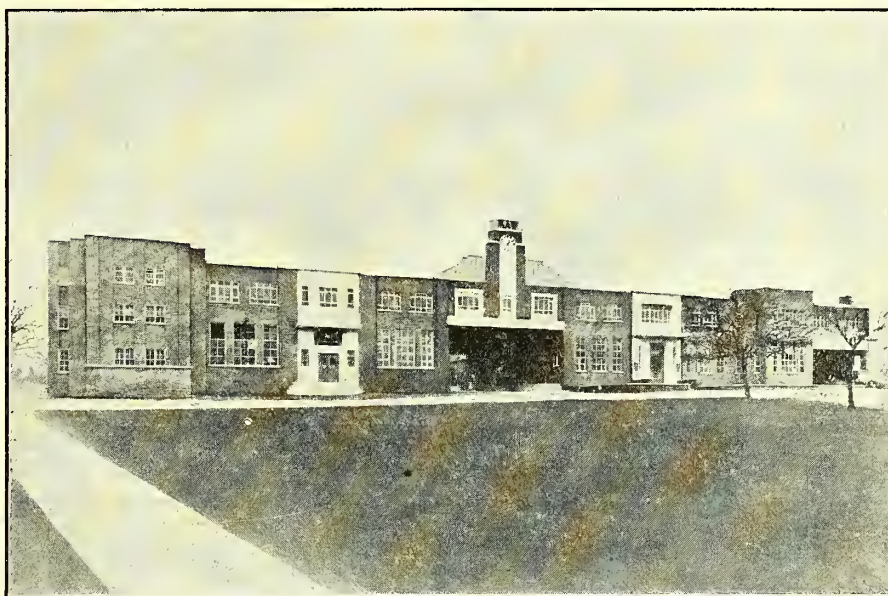
BOUGHT-ON-DISPLAY TERMS YIELD

PROFIT ON SELLING PRICE **39%** PROFIT ON BUYING PRICE **63.6%**

SHOWCARDS ON REQUEST

EUCRYL LTD. Manufacturing Chemists, SOUTHAMPTON

If it's SUNDRIES make it MAW'S



FRONT ELEVATION OF ALDERSGATE HOUSE SHOWING OFFICES

- MAW'S SURGICAL DRESSINGS
- MAW'S PROFESSIONAL SUNDRIES
- MERITOR TOILET BRUSH WARE
- MERITOR FASHION SUNDRIES
- THE LARGEST STOCK OF ASSORTED CHEMISTS' SUNDRIES IN BRITAIN

**S. MAW, SON & SONS, LTD.,
ALDERSGATE HOUSE,
NEW BARNET, HERTS.**

● TELEPHONE BARNET 5555

● TELEGRAMS ELEVEN BARNET

3 CERTAIN! SELLERS!

"SURE-SHIELD" REGD.

FRUIT LAXATIVES

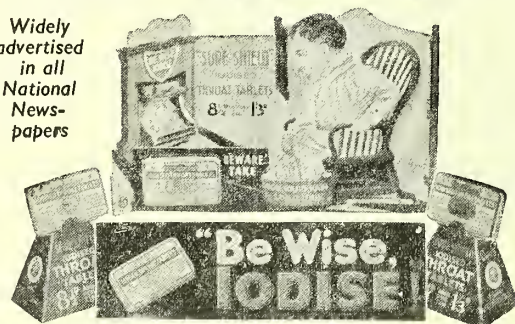


THE POPULAR LAXATIVE
IN CONSTANT DEMAND

"SURE-SHIELD"

IODISED THROAT TABLETS

Widely
advertised
in all
National
News-
papers



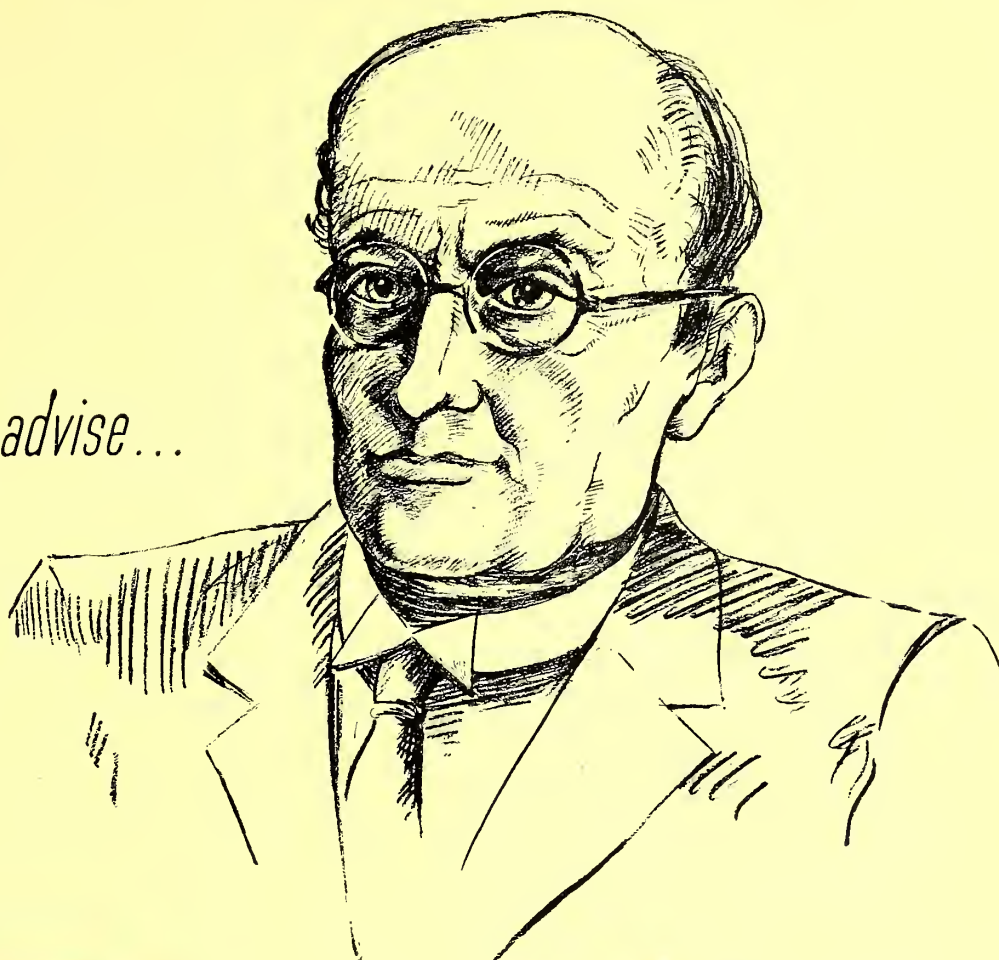
FULL RANGE OF NEW DISPLAY MATERIAL

FRIAR'S BALSAM LOZENGES



A distinctive
Winter Lozenge
prepared with
Aromatic Gums,
Palatable, De-
mulcent and
soothing

Doctors advise...



Rendell

PRODUCTS

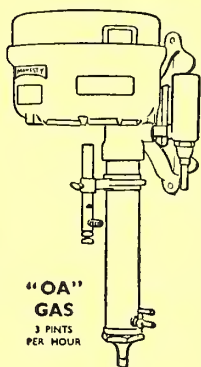
FOR FEMININE HYGIENE

W. J. RENDELL LTD.

HARDWICK HOUSE · 161-5 ROSEBERY AVENUE · LONDON, E.C.1

Distilled Water IS OF VITAL NATIONAL IMPORTANCE THESE DAYS

While our output is greatly restricted by war work, we can still supply the famous range of



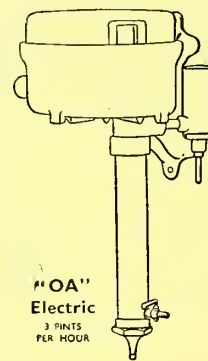
"OA"
GAS
3 PINTS
PER HOUR

MANESTY

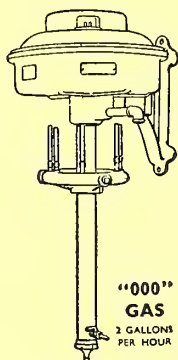
All-British

AUTOMATIC WATER STILLS

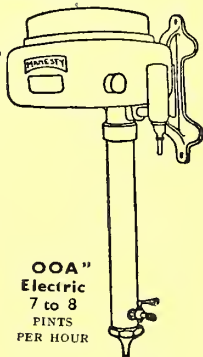
In Hospitals, Pharmacies, Universities, Colleges, Manufacturing Chemists, Chemical Works, etc., an ample supply of distilled water, economically and automatically produced, is a vital necessity. MANESTY Water Stills are made in twelve distinct models, operating by Gas, Steam, Electricity or Paraffin, with outputs varying from 3 pints to 50 gallons per hour. The distilled water produced by these stills is well above B.P. requirements. They operate entirely without attention and they are easily cleaned.



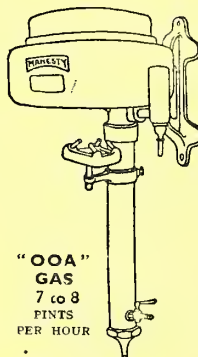
"OA"
Electric
3 PINTS
PER HOUR



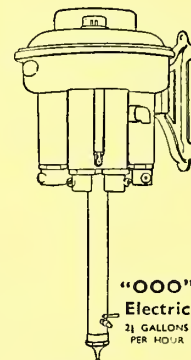
"000"
GAS
2 GALLONS
PER HOUR



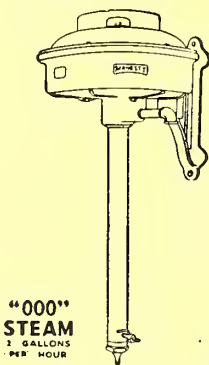
"00A"
Electric
7 to 8
PINTS
PER HOUR



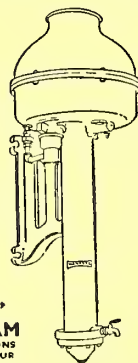
"00A"
GAS
7 to 8
PINTS
PER HOUR



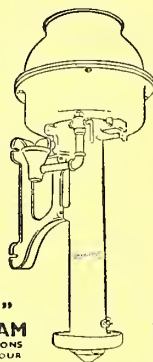
"000"
Electric
2 1/2 GALLONS
PER HOUR



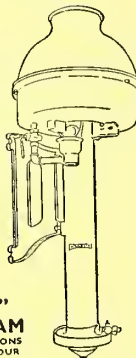
"000"
STEAM
2 GALLONS
PER HOUR



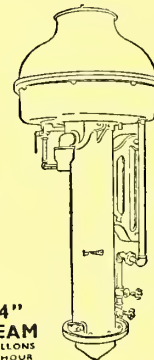
"1"
STEAM
4 GALLONS
PER HOUR



"2"
STEAM
8 GALLONS
PER HOUR



"3"
STEAM
10 GALLONS
PER HOUR



"4"
STEAM
16 GALLONS
PER HOUR

ENTIRELY BRITISH MADE

MANESTY MACHINES LTD.

Telephone:
GARSTON 1511

5 SPEKE HALL ROAD, LIVERPOOL, 19

Telegrams:
MANESTY, LIVERPOOL



Substitute for Sunshine

'KEPLER'

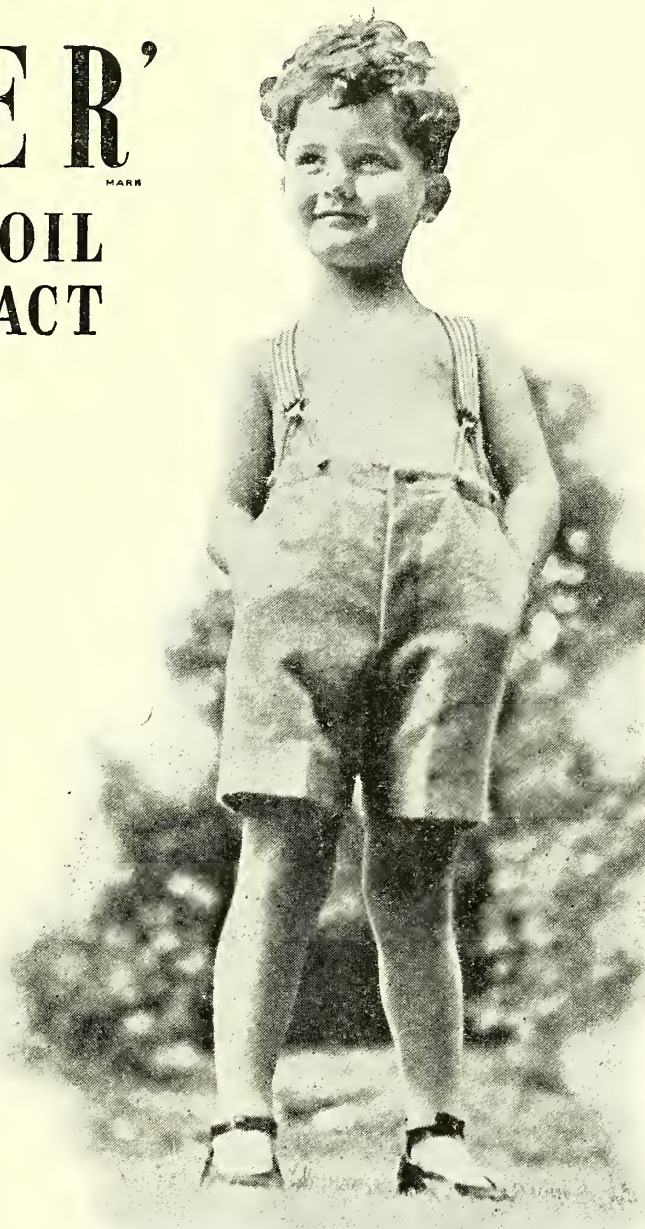
TRADE

MARK

**COD LIVER OIL
WITH
MALT EXTRACT**

for

- sturdy bodies
- strong bones
- straight limbs
- sound teeth
- and
- resistance to infections



Bottles of two sizes,
24/6 and 43/6 per dozen

*London Prices to the Trade (Subject)
Liable to alteration without notice*



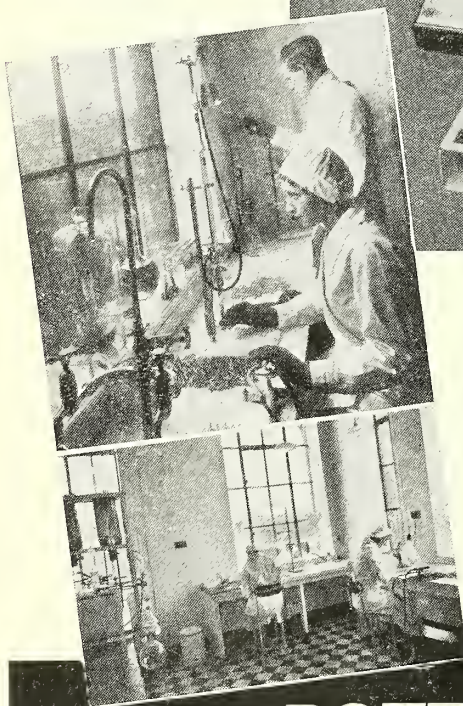
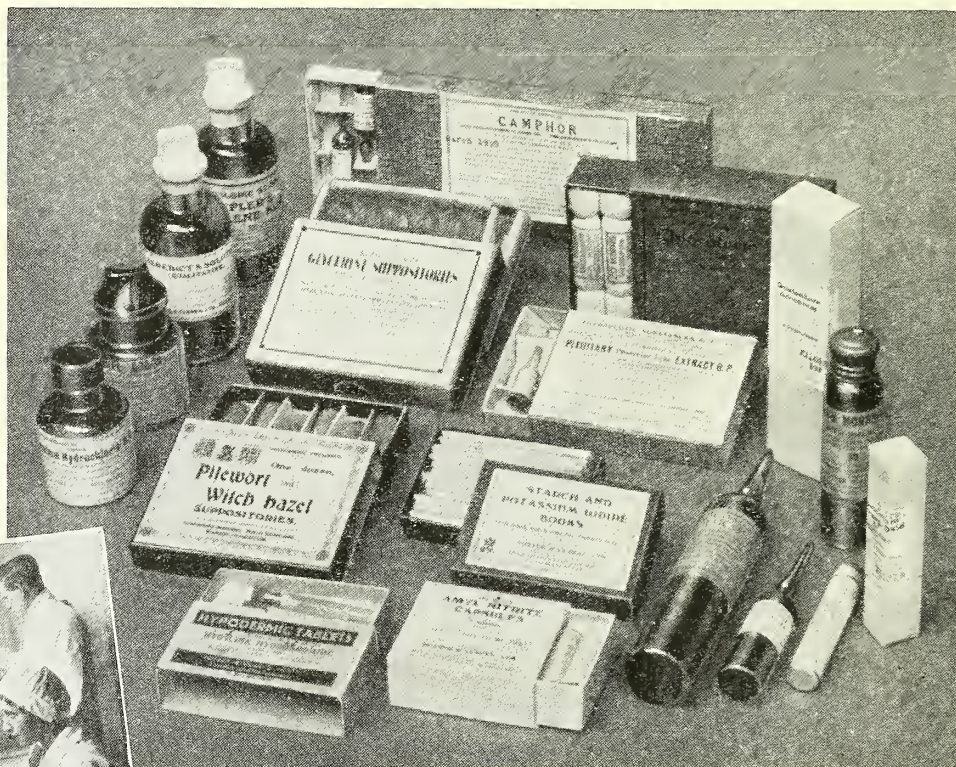
BURROUGHS WELLCOME & CO., LONDON

G 2203

COPYRIGHT

UNREMITTING CARE & ATTENTION are behind all P&C preparations!

Below are two views
of our laboratories
used solely for our
Special Preparations



ACCURACY OF DOSAGE AND STERILITY GUARANTEED
AMPOULES • BOUGIES • ANÆSTHETICS • FRIABLE
CAPSULES • MICROSCOPIC REAGENTS • OPHTHALMIC
PREPARATIONS • ANALYTICAL SOLUTIONS
CATHETER LUBRICANTS • HYPODERMIC TABLETS
PESSARIES • CACHETS • SUPPOSITORIES • INDICATORS
POWDERS • ETC • ETC.

*Full
Price List on
Application—*

POTTER & CLARKE LTD.

60-64 Artillery Lane, LONDON, E.1
77 Dantzic Street, MANCHESTER 4

Phone: Bishopsgate 4761-6

Phone: Blackfriars 8734

The CHEMIST AND DRUGGIST

For RETAILER — WHOLESALE — MANUFACTURER

Published Weekly at

28 ESSEX STREET, STRAND, LONDON, W.C.2

Telegrams: "Chemicus, Estrand, London"

Telephone: Central 6565 (10 lines)

Emergency Address THE PITMAN PRESS, LOWER BRISTOL ROAD, BATH

Telephone: Bath 5491-92

Branch Offices

MANCHESTER · BIRMINGHAM · GLASGOW · SHEFFIELD · LEEDS · NEW YORK · AUSTRALIA · NEW ZEALAND

NEWS OF THE WEEK

End of Summer-time.—Summer-time will end on the night of November 16-17.

Commodity Insurance Scheme extended to Isle of Man.—An Order-in-Council (The Defence (War Risks Insurance) (No. 4) Regulations, 1940 (S.R. & O., 1940, No. 1616, price 1d.)) was recently made extending Part II of the War Risks Insurance Act, 1939, to the Isle of Man as from September 4, 1940.

Exports of Nippers and Pliers.—The Board of Trade has given a ruling in respect of exports of nippers and pliers. It is to the effect that an export licence is now required in the case of all nippers and pliers not exceeding 7 in. in length, excepting such articles as form parts of tool sets which are exported as such, other than jewellers' and dental tool sets. Nippers and pliers within the above limit of size are subject to control if they are exported as parts of jewellers' or dental tool sets.

Distribution of Wholesalers' Stocks.—The Board of Trade has been approached by certain trade organisations, which have drawn attention to the desirability of dispersing stocks of goods now held in wholesale warehouses in order to reduce the risk of air-raid damage. Many of the goods concerned are subject to the restrictions upon home trade imposed by the Piece-Goods and Made-Up Goods (Cotton, Rayon and Linen) Order and the Limitation of Supplies (Miscellaneous) Order, 1940. The Board has therefore announced that in order to mitigate the damage that may result from King's enemy risks to large stocks of controlled goods held in wholesale warehouses, wholesalers whose quotas are exhausted may without infringement of the Limitations Orders place such goods in storage at retailers' premises, provided that it is clear that the goods are sent for storage only and that the retailer acquires no interest in the goods despite the fact that he may have given an order to the wholesaler for similar goods. This arrangement must be evidenced by an exchange of letters or a contract in writing. If the goods so stored are at any time appropriated to an order placed by the retailer they will be considered to be "supplied" at the time of the appropriation.

Importation of Rosin.—Notice to Importers No. 95, issued by the Import Licensing Department of the Board of Trade, states that import licences for rosin (colophony) are allocated between importers on the basis of each importer's direct purchases from overseas countries, other than France, in the year ended December 31, 1939. The exclusion of purchases of French rosin from the basis of calculation of the import quotas resulted from the existence, at the time the basic quotas were fixed, of an open general licence for imports from France. Now that this open general licence is no longer in operation it has been decided that purchases of rosin from France in 1939 shall be taken into consideration in the settlement of future quotas. Importers who purchased rosin direct from France in that year are therefore invited to submit a certified return of their purchases from France in the year ended December 31, 1939. This return should be completed in accordance with the following conditions: (1) The purchases to be included in the return are purchases of rosin (colophony) from France made in the capacity of importers as defined below during the period January 1, 1939, to December 31, 1939, inclusive; (2) for the purpose of the return an importer is deemed to be a person or concern who purchased direct from a seller in France and who first-hand took up and paid for the original documents covering the purchase made; (3) purchases of liquid rosin should not be included. Most importers of rosin have already been circulated to the above effect by the United Kingdom Rosin Importers' Association and it would facilitate matters if importers would send their returns to the Association's auditors, Great, Marwick, Mitchell & Co., 29 Arthur Road, Wimbledon Park, London, S.W.19. Importers may, however, if they prefer, send their returns in confidence to the Import Licensing Department, 5 Southampton Buildings, Chancery Lane, London, W.C.2.

Reserved Occupations Revised.—Changes in the last Schedule of Reserved Occupations, issued by the Ministry of Labour and National Service on September 19, are slight and mainly affect persons outside the drug trade. The age at which wholesale salesmen become exempt from service is raised from thirty to thirty-five, and production engineers become exempt from age twenty-five.

Training of Factory "Watchers."—The Minister of Home Security has issued a request to employers not to make applications for their roof watchers to be trained unless and until such applications are invited by the Ministry. No time will be lost in setting on foot the courses of training, which will be local in each Defence Region. Meanwhile, schemes for working after the sirens have sounded should be carried forward with the best watchers available.

London Emergency Medical Service.—The following have been appointed by the Ministry of Health as pharmaceutical advisors to the hospitals of the London sectors:—Mr. J. B. Sykes, The London Hospital, London, E.1; Mr. J. R. Elliott, Mile End Hospital, London, E.1; Dr. J. Coutts, St. Bartholomew's Hospital, London, E.C.1; Dr. H. Davis, University College Hospital, London, W.C.1; Mr. S. H. White, Middlesex Hospital, London, W.1; Mr. M. G. Payne, St. Mary's Hospital, London, W.2; Mr. F. G. Hobart, Westminster Hospital, London, S.W.1; Mr. E. H. Green, King's College Hospital, London, S.E.5; Mr. J. Pirnie, Lewisham Hospital, London, S.E.13.

Compulsory Fire-watchers for Buildings.—An Order made by the Minister of Home Security under the Defence Regulations directs that a fire-watcher must be present at all times in premises in which more than thirty persons work. The Order also applies to any premises, whether more than thirty persons work there or not, of which the whole or any part is used as a warehouse of greater capacity than 50,000 cubic ft. It does not apply to a warehouse when it is empty. While a hostile attack is in progress in the vicinity, or an air-raid warning is in operation, the fire-watcher must be ready to attack an outbreak of fire, to summon assistance and to use available fire-fighting appliances. The person responsible for seeing that this is carried out is the occupier of the premises. Two or more occupiers of different parts of the same premises may arrange to provide one fire-watcher for the building.

Income-tax Concession to Workers.—As a result of discussions between the Board of Inland Revenue and the Trades Union Congress, it is understood that it has been agreed that no deduction for income-tax purposes shall be permitted which reduces gross wages below £2 2s. For married men, the limit may be increased to £3 2s. upon application to the employers. The T.U.C. has announced in a circular to affiliated organisations that the income-tax authorities are prepared to adopt a number of novel methods to help workers fill up their forms or lodge objections. Officials will attend trade union branch meetings or visit the branch rooms on "club nights" to assist in filling forms. At the larger works they will attend to give advice at the pay offices, canteens or rooms allocated by employers. If necessary, they will open temporary offices in outlying places and keep their offices open after the normal hours. For weekly wage earners engaged on manual work the deductions will date from January 1, 1941, and for all other wage earners from November 1, 1940.

British Property in Enemy Lands.—The Board of Trade announces that it has been decided to establish a register of real and personal property, situated in Germany and Italy, belonging to persons of British nationality resident in the United Kingdom of Great Britain and Northern Ireland and to companies registered there. This step is being taken solely to facilitate whatever arrangements may be found possible after the war. Entry in the register of any claim will not imply any recognition of its validity, nor constitute any guarantee that it will eventually be supported by his Majesty's Government. Persons desirous of registering property should apply for the necessary form

to the Assistant Secretary for Finance, Board of Trade, Romney House, East, Tufton Street, Westminster, London, S.W.1.

The register applies to the following territories only: Germany, within the boundaries of the Treaty of Versailles (including the Saar region) and the territories ceded to Germany as a result of the Munich agreement, 1938; Austria, according to the boundaries of the Treaty of St. Germain-en-Laye; and Italy, Albania, Italian East Africa, and Italian colonies and possessions.

Spitfire Effort.—Every chemist in Whalley Range, Blackburn, supported a social event held on September 26 in aid of the local Spitfire Fund.

Cost of Living.—The Ministry of Labour and National Service announces that on August 31 the official cost of living figure was 87 points above the level of July 1914, compared with 85 points on August 1 and 87 points on July 1.

Liverpool Chemistry Classes.—Classes in chemistry are to be held at the Liverpool City Technical College during the winter months. The staff of the college is now available for consultation by students wishing to enrol for the day pharmacy course.

Anti-tetanus Serum from Canada.—The national commissioner of the Canadian Red Cross has announced that, in response to a message from the British Red Cross organisation, 50,000 packages of anti-tetanus serum were being dispatched immediately from the Connaught laboratories, Ottawa.

Parcel Post Delay.—The Postmaster-General gives notice that under present conditions there is heavy delay to parcel post traffic for certain parts of the country and in the circumstances the public are strongly advised not to forward perishable parcels by post. Compensation will not be paid for damage caused by delay in delivery.

Manchester Golf.—The final meeting of the Manchester Pharmaceutical Golfing Society was held at Northenden Golf Club on September 18, when the usual match between president's and captain's teams was played. The result was a tie. The president (Mr. J. H. Franklin) occupied the chair at dinner in the evening and afterwards presented to the successful players the prizes won during the season, as follows:—Prize of Mr. R. Hough (Hough, Hoseason & Co., Ltd.): G. M. Evans, second; R. N. Aitken; captain's prize: F. J. Cunliffe, second; C. L. Compston; Ucal trophy and memento: S. M. Bostock, second; J. A. Collins; Woolley trophy and replica: F. D. Gee, second prize: W. E. Phillipson; Robinson prize: four-ball, H. Warsden and T. Miller; President's prize: S. M. Bostock, second; S. C. Bottomley; Griffiths Hughes prize: W. E. Phillipson, second; F. D. Gee; Kerfoot trophy and memento: H. Brindle, second; R. Demaine; visitors' prize (presented by the captain), G. J. Dearden. The president said they had had quite a good season. The matches with Liverpool for the Gibbs trophy and Birmingham for the B.D.H. trophy, had had to be suspended owing to transport and other difficulties, but their home matches had all been carried through. Votes of thanks to the president, captain (Mr. C. L. Compston), secretary (Mr. W. E. Phillipson), and donors of the prizes, were carried with acclamation. Mr. C. Stevens is captain-elect for next season.

Branch Meeting at Bangor.—A meeting of the Anglesey, North Carnarvonshire and Colwyn Bay Branch of the Pharmaceutical Society was held at Bangor on September 11, the chairman (Mr. Gwilym Hughes, Conway) presiding. Branch activities for the coming winter were discussed, and it was decided that, in view of the difficulty of getting members together, no special meetings should be arranged, but that the matter be left in the hands of the chairman and secretary to convene a meeting in the event of any important question arising. The secretary read a letter from the Society, dealing with the position of pharmacists in Air Raid Precautions, and outlined the replies he had sent to certain questions. It was agreed that the replies gave a true account of the position in the area, chiefly that pharmacists had not been invited to give any help or advice in A.R.P. matters, and that few pharmacists were connected with the organisations. Many members expressed the opinion that the pharmacy was not a suitable place for persons to enter or to be brought to for treatment during an air raid, owing to the danger from glass and chemicals. After some discussion as to what pharmacists should do in the organisations, it was agreed that, owing to the widely distributed nature of the Branch area, to arrange courses was not practicable, and that individual members should decide for themselves what steps they should take. The National Pharmaceutical Union scheme to assist pharmacists in distress due to the war was explained in outline by Mr. D. A. Bryan and discussed. It was found that several members present had already subscribed and promised quarterly donations, and it was decided to issue an appeal to each proprietor pharmacist in the area to support the scheme, either by donation or by quarterly subscription or both. The treasurer reported that the Branch had subscribed more than its allotted minimum quota to the appeal on behalf of the British Ambulance Corps, £7 4s. 3d. having been sent to the Fund. Indignation was expressed by members at having received a parcel of penny laxatives, not ordered. Since the C.F. list included two or three similar preparations (but not in penny packs), it was hoped that members would return the parcel with a note

to this effect. Questions were asked as to the steps required to be taken by pharmacists to ascertain the genuineness of prescriptions containing scheduled poisons, in view of the arrival in the district of people from the danger areas with prescriptions from the doctor in their home town, both patient and doctor being unknown to the pharmacist. A member who had always prepared his own syrups and used them in proprietaries reported that his sugar ration had recently been reduced by one half, and that consequently he was compelled to buy his syrups already prepared from the drug houses. It appeared from the remarks of other members that there had been an endeavour to make the sugar allowance to pharmacists more or less uniform in the area. A motion was passed, congratulating Mr. R. G. Edwards, Ph.C. (Lord-Mayor Elect of Manchester), on the high honour bestowed upon him.

IRELAND

Business Change.—Miss Mary G. A. Flynn, Ph.C., is opening a pharmacy at Lincoln Place, Westland Row, Dublin.

Belfast Pharmacist's Pilot Son Interned.—Mr. Jas. Dundee, Ph.C., University Road, Belfast, has received official notification that his son, Flying-Officer P. J. Dundee, R.A.F., has been interned in a neutral country owing to a forced landing. Flying-Officer Dundee held the back-stroke swimming championship of Ireland for several years.

Inquest.—A verdict that death was due to respiratory failure caused by taking an overdose of sodium amylal tablets was returned by the jury at an inquest held at Dun Laoghaire on September 14 into the death of Patrick Ryan, Bray. The resident medical superintendent at Grangegorman Mental Hospital said Ryan came to him complaining of neurasthenia. When Ryan said he was poor he gave him fifty sodium amylal tablets with appropriate instructions.

Settlement in Respect of Injury.—An accident at Lisburn on May 20, when Mr. Samuel Orr, Ph.C., 52 Bow Street, was fatally injured by a military motor-lorry, was the subject of an application before the Lord Chief Justice in the Ulster King's Bench on September 20. The dependants of the deceased had brought an action against George Vivian Bines, R.A.S.C., driver of the lorry, on behalf of deceased's only child, Kathleen Gill Orr, now eleven years of age. It had been agreed that a sum of £1,750 in full settlement should be awarded, each party to pay his own costs. The Lord Chief Justice made the consent a rule of court.

SCOTLAND

Shopbreaking.—The premises of Mr. Nicholas Tait, M.P.S., Commercial Road, Ladybank, were broken into recently.

Fire.—The drug department was part of premises of the Newmains and Cambusnethan Co-operative Society, Ltd., Newmains, Lanarkshire, which were destroyed by fire on September 14.—Stock was destroyed when fire broke out in the premises of W. Davidson, Ltd., wholesale druggists, Palmerston Road, Aberdeen, on September 18. Little damage was caused to the building.

Scotland's Export Trade.—The export development committee of the Edinburgh Chamber of Commerce has issued a report to its members on the possibilities of a larger export trade between Scotland and various parts of the world. The report includes details of opportunities which exist for developing trade with Brazil, Spain, Portugal, New Zealand, and British West Indies and covers a fairly wide range of goods. Communications have been addressed by the committee to a large number of overseas organisations, and replies now being received indicate a readiness on the part of members of these organisations to explore the possibilities of buying their requirements from this country. The Chamber is assisting in making contacts between buyers and sellers.

General Council of Panel Chemists (Scotland).—A meeting of the General Council of Panel Chemists (Scotland) was held at 36 York Place, Edinburgh, on September 18, Mr. F. W. M. Bennett in the chair. It was reported negotiations had taken place with the Department of Health in regard to extension of the emergency hospital scheme. It was further stated that arrangements had been made to provide medical attendance and medicines for lumbermen employed in various districts in Scotland. Prescriptions were to be issued to the men written on N.H.I. prescription forms and marked "N.F." in the index-mark place; they were to be sent in a special bundle to the Insurance Committee to be priced by the Central Checking Bureau at Drug Tariff rates. Where a bottle was supplied this should be noted by the chemist on the prescription and the price would be allowed by the Checking Bureau. It was agreed to intimate to Panel chemists that, owing to paper shortage, N.H.I. triplicate prescription forms would be temporarily suspended. It was reported that, after full discussion, the Pharmaceutical Standing Committee (Scotland) had suggested that there was not sufficient evidence to justify any departure from the agreement entered into in September 1939. Uncertainty also existed as to the position under the Purchase Tax scheme. The whole matter would require to be reviewed in the light of further developments before a final decision was reached, and the Standing Committee had appointed a small subcommittee to investigate and conduct negotiations.

EMPIRE AND FOREIGN NEWS

Canadian Pharmaceutical Association.—The annual conference of the Association for 1941 will be held in Vancouver, British Columbia. The president for the year is Mr. W. A. McKnight, Winnipeg, Manitoba.

South African Pharmacists' Resolution on Commissioned Rank.—A resolution suggesting that all qualified chemists now in the army who are engaged on dispensing and other pharmaceutical work should be given commissioned rank was passed by the South African Pharmacy Board at its meeting in Durban and is to be sent to the Minister of Defence. The resolution also asked the Minister of Defence to insist that all men engaged in dispensing work in the army should be fully qualified chemists. At present, it was urged, camp dispensers were not in a position to suggest to unit commanders and other officers how the dispensing of medicines could be improved.

Minimum Price Agreement Upheld in U.S.—Recently the Supreme Court of Pennsylvania gave its decision in a case brought by the perfumery manufacturer Lenthéric against the American Woolworth organisation. Messrs. Lenthéric had entered into "fair trade" contracts with retailers selling their products in Philadelphia, and had stipulated a minimum price of fifty cents per ounce or any quantity less. Messrs. Woolworth placed on sale in some of their stores certain Lenthéric perfumes rebottled in containers of 2.4 and 3.5 c.c., sold at ten cents per container. At this price the amount received for the number of containers necessary to equal one ounce of Lenthéric perfumes exceeded fifty cents. The products were sold under the Lenthéric trade names, with the addition of the words "rebottled by M. N. Greene Toiletries, N.Y., wholly independent of Lenthéric." The plaintiffs sought an injunction to prevent the sale of their perfumes in containers of any size at less than the minimum "fair trade" price of fifty cents. The court found in their favour.

Report on Indian Chemical Industry.—A report recently submitted by the medicinal preparations subcommittee of the Indian Chemical Manufacturers' Association, Calcutta, to the Government of India, states that the drug and pharmaceutical industry in India has developed considerably recently and that, to enable it to make further headway, simultaneous growth of heavy and fine chemical industries and industries connected with coal carbonisation and the production of solvents is essential. If the required basic materials and chemicals were readily available, it would be possible to produce in India all the drug requirements of the country. Nearly three-fourths of the drugs mentioned in the British Pharmacopœia grow in India in a state of nature, it is urged, and the remaining one-fourth could be easily cultivated in one

or other parts of the country. In appendices to the report, the subcommittee has two lists of (1) drugs of the British Pharmacopœia that grow in India, and (2) drugs included in the British Pharmaceutical Codex and the Extra Pharmacopœia which either grow indigenously or can be easily grown. It is the opinion of the subcommittee that if due attention is paid to the proper cultivation and utilisation of vegetable drugs, India can not only be completely self-supporting in this respect but will also be able to develop an export trade in crude vegetable drugs.

Medicine-bottle Change in U.S.—Recent changes in medicine bottles have been almost wholly confined to the closures, but the Armstrong Cork Co., Lancaster, Philadelphia has brought out a bottle of quite new shape. It is the work of an industrial designer who consulted both physicians and pharmacists before setting to work on the new design. The manufacturer claims the following special features for the new bottle: Drip-proof pouring lip formed by a groove beneath the lip and extending almost round the circumference of the neck, enabling a spoon to fit snugly beneath it from any position; raised flutings around the bottle body to ensure that the bottle does not slip in handling; increased label space, allowing more room for written directions and making it unnecessary to turn the bottle to read the message; wider base, to give a lower centre of gravity; squatness, enabling the bottle to fit readily on shelves of the usual type of medicine cabinet or in the pocket of the purchaser. In the accompanying illustration the new bottle is shown in rear and three-quarter front views alongside a four-ounce bottle of present conventional American pattern for dispensing purposes.



TOPICAL REFLECTIONS

Christmas Shopping.—Your illustrated pages (pp. 153-156) setting forth a good selection of Christmas gifts, and your editorial comment (p. 159), are a reminder to retail chemists to settle, if they have not already done so, the lines on which they intend to cater this year for an important feature of their pre-Christmas trading. In the present abnormal conditions we are all resolved, as I need hardly point out, to uphold the banner of civilisation as far as in us lies. Looking through your illustrations, I notice a general simplification of design and ornament that is in accord with the nature of the time in which we are living. Any emphasis on elaboration would have struck a false note; and the excellent taste of the relatively plain labels and containers shown should appeal to the war-time public. One can hardly suppose that any good man of business will overbuy goods of these types at the present juncture: the tendency may, in fact, be in the opposite direction. Each retailer must be the judge of his own requirements. With traffic conditions as they now are the need for early ordering is obvious. For a similar reason it will not be out of place to ask one's customers to shop well in advance of Christmas so far as gifts are concerned.

Tartar Emetic.—The attractive article by Mr. Kirkby on Adrian Mynsicht and John Partridge (p. 160) should be kept for reference by everyone interested in pharmaceutical history. As Wootton points out in his "Chronicles of Pharmacy" (I, 383), the claim of Mynsicht to have originated tartar emetic has not gone unchallenged; perhaps he gave currency to a preparation just coming into therapeutic use by being the first author to describe the process of manufacture, and so received the credit of having devised it. Medical historians appear to have overlooked the fact that although Mynsicht's treatise containing his description of the salt was published in 1631, and ran into numerous editions, emetic tartar was a long time in superseding the older glass of antimony. About a century and a half later Edward Jenner (1749-1823), the protagonist of vaccination, issued a pamphlet with the title "Cursory Observations on Emetic Tartar . . ." setting forth his preference for his chemical over glass of antimony as the active ingredient in antimonial wine. The British Museum copy of this pamphlet has a few corrections in Jenner's handwriting.

Minimising Noise.—Your abstract of an article on plugs for the ears (p. 157) gives in a simple and practical form the points we need to consider in efforts to lessen the impact of enemy noises. Even peacetime din can, of course, be deleterious. It is on record that the health of John Leech, the caricaturist, was seriously affected by the cries of hawkers, the playing of barrel organs and so forth near his house: and some of your readers may have chuckled over the elaborately courteous letter addressed by Thomas Carlyle to a neighbour the crowing of whose cock maddened the Sage of Chelsea in his study. The malevolent noises of the present war, with their calculated intensity, are a form of assault that should be treated with entire seriousness; their pathological effects may be far-reaching, and some of us may have regarded too lightly the results of exposure to them. Of the forms of plug proposed on p. 157 I give my vote to the last one: others, however, may find in this or another a hint suggesting some modification that will make an improvement on an existing type.

Pooling Expenses.—The new working agreement between the Chemical Society, the Institute of Chemistry, and the Society of Chemical Industry (p. 136) is worth consideration, not only by chemists who are already members of one or more of these bodies but also by those engaged in pharmacy. The details of the agreement are at first sight a little complicated, but when one "gets down" to them they seem reasonable enough. The question of the high cost of publishing abstracts of scientific monographs—now, for obvious reasons, an urgent problem—is bound up with that of the overlapping of research in different countries and sometimes even in the same country. Avoidance of this overlapping would be helped by the observance of two general principles: a more careful search at the outset for existing monographs and a more rigorous compression of statements of tentative findings. The agreement between the institutions mentioned is all to the good, and when it has reached the stage of regular and smooth working the net saving should be considerable. Its progress will be watched, no doubt, by those responsible for the direction of other learned societies; and it is not impossible that the rulers of one in which pharmacists are interested may consider the desirability of following suit. **Xrayser**

PARLIAMENTARY NEWS

X-ray Apparatus in Naval Hospitals.—Asked what x-ray treatment was provided in naval hospitals, the First Lord of the Admiralty (Mr. A. V. Alexander) stated, on September 17, that all Royal Naval hospitals were fitted with x-ray apparatus, and portable sets were carried in all cruisers and larger vessels. The facilities were used for diagnosis, and were satisfactory, and the few cases requiring treatment were sent to civil hospitals.

Purchase Tax.—Mr. Liddall, who suggested that the proposed sales tax was bad and unpopular, asked the Chancellor of the Exchequer on September 17 whether he would consider the advisability of substituting a 25 per cent. stamp duty on retail sales. Such a tax, to be named the victory tax, would apply to approximately £1,000,000,000 value of stock, which was at present held by retailers, and which would not, under the sales tax, be taxed.

Sir Kingsley Wood: I am not prepared to accept the assumption made by my hon. Friend. As I stated in my Budget speech, I am satisfied that a retail sales tax would be impracticable in view, amongst other reasons, of the innumerable daily transactions that would be involved and of the large number of retailers who keep no accounts; and the matter has already been determined by Parliament.

In an oral question on the same day Mr. Liddall asked the Chancellor of the Exchequer the estimated cost of collection of the proposed sales tax; what steps were proposed to prevent evasion; whether was it proposed that the retailer should add his profit to the total cost of the article taxed, including the tax; and, if not, what provision was made for recompensing the retailer for bad or damaged stock on which he had paid tax and was unable to collect from the public? The Chancellor replied to the effect that it was not expected that the Purchase Tax would be costly to administer or that any appreciable number of additional officials or staff would be required. Verification of the quarterly returns made by registered persons would be instituted. It would be illegal for a retailer to charge any percentage on the tax itself by way of profit. No provision was made for recompensing the retailer on bad or damaged stock and in this respect the tax must follow the purchase price as a normal trading risk to be met out of gross profit. He further stated that the value prescribed by the Act was the net cash delivered price of the goods, and tax was payable on that value. There was no exemption for sales of second-hand goods, and if a wholesale merchant sold them in the course of his business he would have to charge tax on them.

COMPANY NEWS

P.C. means Private Company and R.O. Registered Office

NORTHERN CHARCOAL PRODUCERS, LTD. (P.C.).—Capital £100. Objects: To carry on business as manufacturers of and dealers in charcoal, chemicals, patent fuels, etc. George F. Ward and Thomas B. Hustler, Caton, near Lancaster, directors.

H. A. BUTTS & SON, LTD. (P.C.).—Capital £5,000. Objects: To acquire the business of chemical merchants carried on by Herbert A. Butts and Graham W. Butts as "H. A. Butts & Son." H. A. and G. W. Butts, directors. R.O.: 9 Fenchurch Avenue, London, E.C.3.

COLMORE & COOK, LTD. (P.C.).—Capital £500. Objects: To carry on business as oil refiners, soap boilers, etc. Chas. A. Colmore, Harvel, near Meopham, Kent, Francis H. Cook, Watford (director, Fountain Products, Ltd.), Sydney Atkinson, 59 Doughty Street, London, W.C.1 (director, Fountain Products, Ltd.), directors. R.O.: 50 Islington Park Street, London, N.1.

HORLICKS, LTD.—The directors' report for the year ended March 31, 1940, shows that the profit for the year amounted to £225,424, compared with £191,717 in the previous year. Provision for income tax and National Defence Contribution amounts to £122,841, against £61,938; general reserve, £5,000, against £15,000, making a total of £120,000. Dividends are maintained at 30 per cent. for the year; balance brought forward, £20,582. The directors state that transition to war conditions caused business to be somewhat uneven, but the general trend in the current year has been satisfactory.

Voluntary Liquidation.—**H. TOWN & CO., LTD.**, 163 Abbott Road, Poplar, London, E.14, wholesale chemists, etc. The statutory meeting of creditors was held on September 2. Statement of affairs showed ranking liabilities of £1,991, against net assets of £407 (a deficiency of £1,584). The principal assets were cash in hand and at bank, £106; stock, £439, valued at £200; and book debts, £390, expected to produce £81. The business was founded by the late Mr. Henry Town in 1878. The company was registered in August, 1920, and at that date the assets were valued at £2,760; liabilities, £1,560. Shares to the value of £1,200 were issued to the vendor, and a further 196 shares of £1 each were allotted for cash. In 1936 the turnover was £15,685 (net profit £14), but in the following years sales declined and losses were

sustained. In 1937 the turnover was £13,900 (net loss £204), and in the following twelve months there was a net loss of £330 on sales of £12,311. During 1939 the turnover declined to £10,900 (net loss £403). The present position was attributed to a slum-clearance scheme, Sunday morning closing, competition from stores, and the difficulty of finding suitable staff as employees were called up. A resolution was unanimously passed confirming the voluntary liquidation of the company, with Mr. W. H. Cork as liquidator, and a committee of three creditors.

TRADE NOTES

VARKOFF PROPRIETARIES (1940), LTD., Carnarvon, North Wales, are suppliers of Dr. Varkoff (liver extract) tablets.

MAZDA ELECTRIC LAMPS.—The British Thomson-Houston Co., Ltd., Crown House, Aldwych, London, W.C.2, call attention elsewhere in this issue to the advantages of the Mazda coiled-coil lamp.

ADVERTISING CAMPAIGN.—A. L. Simpkin & Co., Ltd., Sheffield, 6, announce that they are about to launch a vigorous advertising campaign in connexion with their medicated glucose lozenges.

BOTTLE CAPPING.—British Celanese, Ltd. (Dope Dept.), Hanover Square, London, W.1, are able to supply a bottle-capping solution in a wide range of colours and in special colours to order. A free sample of the product will be sent to anyone interested.

THOMAS TYRER & CO., LTD., manufacturing chemists, Stratford, London, E.15, state that, owing to unforeseen circumstances deliveries may be somewhat delayed. The company are taking every step to minimise the inconvenience caused their customers.

PRICE REDUCTION.—Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, inform us that due to lower manufacturing costs and increased demand they have been able to reduce the prices of Uropac. This product is employed in intravenous urography and other radiographic investigations.

Business Changes

ROBERT BLACKIE, LTD., advise us their address is 16 Melon Road, London, S.E.15.

THE SILVERDALE MANUFACTURING CO. (A. S. Lloyd) has temporarily removed from 110 Cheapside, London, E.C.2, to Briar Cottage, Raglan Road, Reigate, Surrey. Telephone: Reigate 2893.

PAPIER POUDRÉ, LTD., announce that their temporary address is c/o D. C. Garage, 50 Poland Street, London, W.1. New premises are being arranged and resumption of supplies is expected in about a month.

P. MELLIS & SONS, essential oil merchants, temporary address 143 Fordwych Road, London, N.W.2, announce that their offices and works have been disorganised, but they hope to resume deliveries within a few weeks.

H. W. GRAESSER-THOMAS, LTD., request that all correspondence for the company and for Yorkshire Tar Distillers, Ltd., should be addressed "c/o National Provincial Bank, Llangollen." The company's exact address will be notified shortly.

PROPRIETARY ARTICLES TRADE ASSOCIATION.—Since September 18 the P.A.T.A. offices have been temporarily transferred to the offices of the National Pharmaceutical Union, 4-5 Queen Square, London, W.C.1, but communications should still be addressed to 43 Gordon Square, London, W.C.1.

G. B. KENT & SONS, LTD., 75 Farringdon Road, London, E.C.1, have purchased the goodwill, stock, machinery, and raw materials, etc., of Titterton & Howard, Ltd. (brush manufacturers, established 1824). All inquiries for Titterton & Howard brushes should be addressed to Titterton & Howard, 75 Farringdon Road, London, E.C.1. Telephone: Holborn 5066-7-8.

BORAX & CHEMICALS, LTD., announce that members of the staff who remained at the London office of the firm after transfer of most of the office activities to Marlyn's House, Guildford, Surrey, have themselves now been removed to Guildford. All communications should be made to Guildford unless customers find it more convenient to deal with the local offices at Liverpool (Canal Street Chemical Works, Bootle, 20), or Birmingham (15 Summer Row, 3).

Proprietary Articles Trade Association

Additions and Alternations to Protected List.—**A. H. Cox & Co., Ltd.**—Zom pile-cure tablets, 1s., 6s. doz. **Potter & Clarke, Ltd.**—Bush tea, 1s., 7s. 6d. doz.; Kasbah kidney cure, 1s., 7s. 6d. doz. **Thos. Harley, Ltd.**—From October 1 to 15 inclusive retailers will receive a bonus of 13 to the doz. on minimum orders of one doz. of either Rodine phosphorus or red squill rat poisons, or Rodine beetle and cockroach poison. **A. F. Sherley & Co., Ltd.**—Retailers are allowed an additional 2½ per cent. for cash within one month of invoice date.

Deletions.—**Cloister Laboratories, Ltd.**—Cloister herbal tea. **Koray, Ltd.**—Koray brand tablets.

SHOP WINDOWS IN WAR-TIME

RECENTLY there have been issued by the Research and Experiments Department of the Ministry of Home Security two bulletins (Nos. C.9 and C.10) dealing with the protection of plate-glass windows and with the use of flexible substitutes for glass. The first is concerned with vertical windows, both fixed and opening, fitted with plate glass $\frac{3}{16}$ in. or more thick. Such windows are prone to damage by blast, it is stated, because of their large areas, while small panes of plate glass are relatively strong, though they may fail by breaking of the frame. The weakest method of fixing plate glass is by means of clips and bolts through the glass at the edges of panes. Stout steel or bronze frames are generally better than wooden ones, though much depends on the dimensions of frame sections in relation to pane size. When a bomb explodes, direct blast pressure may force the window inwards, or suction following the pressure pulse may pull it outwards. At greater distances, reflections of the shock wave may start vibrations in a window that has the same natural frequency, and such a window may then break while others close by are unharmed. The minimum distance at which plate glass will escape damage from an explosion cannot be predicted, but within 200 ft. its chance of survival is small. Beyond that distance, the chance depends on factors that include size and thickness of pane, frame fixing, size of bomb, method of detonation and reflection of blast wave from adjacent buildings. The last factor is chiefly responsible for the apparently freakish fracture of windows often remarked. Panes facing ends of streets leading towards the site of an explosion frequently break when adjacent windows escape, and where blast travels along a street the side panes (at shop entrances, etc.) may be broken and larger front panes escape, or the reverse. When a pane breaks under severe blast, fragments may be scattered violently, and it is not possible to foretell whether they will fly inwards or outwards. When a pane breaks under distant blast, pieces generally fall both inside and outside within a few feet. Plate glass in internal partitions, showcases, etc., is almost equally as liable to fracture and scatter as glass in external windows, while plate glass in doors and sliding or hinged windows is somewhat less vulnerable than in fixed windows, provided the door or window allows some degree of movement. Decrease in risk does not warrant the omission of protective measures, and it is desirable to fasten doors wide open and generally to open windows during raids.

Resisting Fracture.—No method exists of preventing fracture of glass under blast except by complete closing of the window opening, as described in A.R.P. Memorandum No. 12, "Protection of Windows in Commercial and Industrial Buildings"; nor has any method yet been discovered of materially increasing the resistance of glass to blast while retaining its transparency. Various forms of bracing and damping devices have been investigated by the Department, but none has been found that can be relied on to strengthen the resistance of the glass. In certain circumstances a bracing device may even increase liability of the pane to fracture. An important objection to such devices is that they may give the occupier of the building a false sense of security, blinding him to the need for providing against the danger of flying glass. The possibility of increasing the resistance of large sheets of plate glass is being investigated, but research has not so far indicated more than that to provide a flexible setting for the glass is useful.

Minimising Results of Fracture.—Since fracture of plate-glass windows cannot be prevented if their transparency is to be retained, efforts should be directed towards minimising the results of breakage (injury from flying glass; damage to stock both from flying glass and from exposure to weather; pilfering of stock and loss of trade). The following methods are available. Windows may be covered externally with boarding on securely fixed stout framing, and provided with hinged shutters over openings to permit viewing of the display space within. Under severe blast such boarding may be dislodged bodily, but will probably be replaceable after minor repairs. Boarding gives some protection against weather and pilfering, but little against internal scattering of glass fragments, and it is therefore desirable to add further protection. Rolling shutters of steel or wood give less protection than boarding; under severe blast they may be dislodged from their guides, and while open-mesh shutters of "portcullis" type often escape damage by blast they protect only against pilfering. Internal damage may be much reduced if a solid brick wall is built at the back of the display space. The wall should extend to the ceiling, and, if $12\frac{1}{2}$ in. thick, will give lateral protection like that afforded by an air-raid shelter. Even with only a 9-in. wall the protection is appreciable. Entrance to the display space should be at the side and not through the protecting wall, and the method may necessitate special support for the wall. Wooden panelling behind display spaces, if substantial, well-braced and extended to the top level of the glass, provides useful protection. Where panelling is low, wire netting of $\frac{1}{2}$ -in. mesh should be securely fixed between the panelling and the ceiling; it will stop all but the smallest fragments of broken glass, and these, except under severe blast, are not likely to fly far. Two layers of netting are not necessary. Expanded metal of similar-sized mesh gives equal protection, but less transparency. The netting must be securely fixed

by firm stapling or strongly-nailed battens. To allow cleaning of the glass, it is best attached to removable wooden frames, but these should not be flimsy, for it has been found in practice that the fixing and framing are the weakest parts of protective netting systems. The netting should be as close to the glass as possible, preferably touching it. Netting of larger mesh than $\frac{1}{2}$ in. has much less effect in arresting flying glass fragments. Some local authorities have asked shop owners to fix wire mesh outside plate-glass windows lest glass lying in streets should immobilise civil-defence vehicles by damaging tyres, but experience has shown that the risk has been exaggerated. Blinds and curtains, particularly if heavy and thick, give a moderate degree of protection against flying glass fragments, except under intense blast. Adhesive treatment affords a measure of protection, and the following "anti-scatter" adhesive treatment is suitable for plate glass $\frac{3}{16}$ in. or $\frac{1}{4}$ in. thick, though it reduces transparency. A full coat of varnish is brushed on the glass and, when it is tacky, a sheet of fabric or strong textile netting is pressed into it so that the whole glass area is covered. When the material is thoroughly set a full coat of varnish is brushed over the whole. Where considerable transparency is required, as in display windows, textile strips may be used, though the treatment is less efficient than a close-mesh netting all over the glass. Interspaces between strips should be not more than 6 in. each way. Transparent cellulose film pressed into and afterwards coated with varnish is a useful alternative to fabric. Adhesive treatments are useless on obscured glass, unless the surface is smooth enough for the material to adhere firmly. Where adhesion is likely to be poor, internal wire-mesh screens should be used or the glass removed. Liquid coatings and paper strip are not recommended for plate glass.

Glass Removal and Repairs.—Much glass in interior partitions, show cases, fanlights over doors, etc., can be dispensed with, at least in wartime, and should be removed, substituting translucent or opaque materials. Materials having a transparency approaching that of glass are difficult to obtain, owing to the demands of aircraft production, and they are not made in sizes suitable for average shop-window openings, unless subdivided. If the opening is bricked up or otherwise closed, leaving a glazed aperture about 4 ft. by 2 ft., this will usually allow inspection of the display space from the street, or will at least indicate that the shop is open. The aperture may be glazed with a transparent glass substitute, if obtainable, or by plate glass protected inside with wire mesh. Flexible substitutes may be either translucent or, where translucency is not required, opaque. Most translucent substitutes are at present made of synthetic resins or cellulose substances reinforced with metal or textile mesh. Alternatively, cotton or linen textiles may be used; while not ordinarily windproof or rainproof these may be obtained treated with cellulose lacquer or boiled linseed oil to make them so either beforehand or in position at the window opening.

Translucent Glass Substitutes.—The qualities desirable in translucent glass substitutes include weatherproofness, durability (the material should not lose its light-transmission value, suffer from "crazing," or become brittle too readily); resistance to pressure; and slow-burning properties. Only materials reinforced with metal mesh are likely to be suitable for use in roof-glazing bars. Preliminary blast tests show that if flexible glass substitutes are fixed with nails or staples, the material, when displaced, is usually torn at the edges, while where edge fixing is too strong the material may be burst in the centre. The following methods of fixing are accordingly being tested: In steel windows, a soft non-setting putty or mastic, preferably one that can be scraped off and re-used; in steel and wood windows, fastening of the edges with adhesive tape; in wood windows, fixing by ordinary wood glazing-beads in the glass rebates; in wood windows, fixing on face of frame by plasterer's lath or similar wood strip; in steel and wood windows, holding the edges of the material in strip rubber channelling, similar to that used on car windscreens.

Opaque Glass Substitutes.—The following materials may be used: Galvanised flat sheet steel; composite sheets of asbestos and steel; hard wallboards. All will stand up to blast pressures considerably greater than those that fracture roof glass, and when dislodged they can usually be replaced undamaged; they are fixed in the same way as roof glass. Combinations of wire mesh and bituminous sheeting, soft wallboards, etc., probably require support. Experiments have shown that flat asbestos-cement sheeting, including the newer "flexible" type, is readily fractured by blast. Wallboards require painting or impregnation with preservative to give protection against weather.

Vertical Glazing.—The materials described as suitable for roof glazing can also be used in windows. In addition, bituminous sheeting, plywood and plasterboard can be used, but the two latter should be painted on the face and edges to prevent moisture soaking in. A plasterboard faced with bituminous sheet is obtainable.

Where there is risk of burglary the fixings of glass substitutes may have to be specially strong, and materials may need to be used that cannot readily be cut with a knife.

PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND

THE monthly meeting of the Council of the Pharmaceutical Society of Northern Ireland was held at 73 University Street, Belfast, on September 20, the president (Mr. Walter C. Tate) in the chair. Others present were Messrs. James Glendinning (vice-president), H. F. Moore (treasurer), S. H. Forrest, J. E. Connor, J.P., W. Martin, J. Donaghy, J. McDowell, J. F. Grimes, C. Abernethy, J. W. Gray, J.P., J. T. Nicholl, J. McGregor, and Professor E. C. Mayrs, M.D.

THE SECRETARY (Mr. D. L. Kirkpatrick) read a letter from Mr. I. W. Parker in reply to one asking him to reconsider his resignation on account of ill-health. Mr. Parker said he had reconsidered his resignation according to the wish expressed in the letter, and hoped in the course of a few months to be able to attend the meetings of the Council again.

THE PRESIDENT said that since their last meeting the death had been announced of Mr. Andrew G. Kerrigan, as the result of an air raid on the other side of the water. Mr. Kerrigan had qualified in 1937 and his name was admitted to the English register in 1938. He was sure they all regretted that Mr. Kerrigan had come to such an early end. It was not their custom to take cognisance of the loss of a member of their Society outside the Council, but this was a case in which they could make an exception. He was sure they were all with him in expressing deep regret at the loss sustained by the death of one so young as Mr. Kerrigan, and also the deepest sympathy with his sorrowing parents. Mr. H. F. MOORE said he was greatly grieved when he read the announcement of Mr. Kerrigan's death, and he associated himself in the closest manner with the president's expression of sympathy.

On the proposition of THE PRESIDENT sympathy was expressed with Mr. Acheson on the death of his brother.

THE SECRETARY read the report concerning the June examination, which stated that fifty candidates had sat, eleven of them re-entries. Of the fifty twenty-nine passed. The highest marks awarded on the written papers were eighty-four and eighty, and on the practical papers and tests sixty-five. There was a marked inequality in the answering of the two papers. For example, the candidate who obtained eighty-four on his written pages dropped to fifty-six in his practical. With some exceptions in the tests the average of the remainder who passed was fifty-six or thereabouts on both papers. In some cases the annotated diagrams to the answers given were good and illuminating; in others they were not impressive or helpful. Comments by examiners were also read by the secretary. Section "A" of the written paper on pharmaceuticals had on the whole been satisfactorily done, but it should be remembered that this Section was not of an exacting nature. In Section "B" there had been candidates who suffered because too much time had been devoted to Section "A." The results in this Section were variable. A small number of candidates had obtained really good marks, a much larger number had been very poor, the remainder just averaging a pass mark. The standard in practical work was steadily improving. Several candidates did quite well in that part, and would have passed but for their manifest weakness in theory. Dealing with the examination in chemistry, the report indicated that there was a high proportion of weak candidates. What was noticed was not so much a lack of knowledge of a particular part of the syllabus as a general weakness—shown, for example, by incorrect formulæ and equations, descriptions of impracticable methods of preparing and collecting common gases, and ill-considered guesses at chemical reactions which were not really known. Questions in the organic section of the paper that involved chiefly a knowledge of book-work were well done. In the practical examination the organic preparations presented were variable in quality, but many were good. The quantitative work was outstandingly accurate. The report stated that in botany it was necessary to make a definite allowance to all candidates in present circumstances, so that there could be no question of a penalty for existing unsettled conditions. It became clear, as the reading of the students' scripts proceeded, that more than one-half the candidates would require the allowance. In contrast, six of the candidates returned theory papers of a really good standard, showing a sound knowledge of the principles, and, in addition, a reasonable body of fact. Stress was laid on the necessity of a good knowledge of English being evidenced in the papers. The answering in theoretical experimental physics attained the average level of former examinations, being much better in light and heat than in electricity.

MR. H. F. MOORE spoke of the wonderful success of the "Belfast Telegraph" Spitfire Fund, and gave notice that at the next meeting he would move that 500 shillings (£25) should be subscribed by that Society. The treasurer's statement, submitted by MR. MOORE, showed the finances of the Society to be in a healthy state.

On the motion of MR. CONNOR, seconded by Mr. J. GLENDINNING, a hearty vote of thanks was passed to Mr. Moore, to whom, for his services in the respect stated, the Society felt greatly indebted.

A discussion took place on the rivalry introduced by certain companies in the dispensing of drugs, and it was decided, on the motion of

MR. GLENDINNING, that the Society's legal adviser should be consulted in regard to the matter for report at the next meeting.

At this stage the following students, successful at recent examinations, were presented with certificates: Nial Crannigan, John Donnelly, Victor John Elliott, William Smiley Hall, Edward William Wylie Mason, James Patterson, James Davis Pollok, and Bernard Quinn. All were welcomed and congratulated by THE PRESIDENT, who addressed them on "The Origin and Progress of Pharmacy." MR. GLENDINNING also addressed the successful students, and impressed on them the importance of giving their whole minds to their business. They were also to fight against the companies that were usurping that business. Doctors and dentists, he said, had not to contend with such opposition. MR. CONNOR said it was their duty to be loyal to one another, and uphold the highest traditions of their Society.

MARRIAGES

Notices for this column must be authenticated

CAMPBELL—CAHILL.—At Cong. co. Galway, Doctor Campbell, Ballycroy, to Maura Cahill, Ph.C., daughter of Mr. and Mrs. J. J. Cahill, Castlebar, co. Mayo.

LINTON—FOWLER.—At St. Nicholas Church, Radford, Coventry, on September 12, Hewett S. Linton, M.P.S., 8 Broadway, Earlsdon, to Vera Joan Fowler, M.P.S., Daimler Road, Coventry.

McNICOL—SAWYER.—At St. Mark's Church, Newby, Scarborough, recently, William M. McNicol, Ings Road, Hull, to Thelma Louise Sawyer, M.P.S., 17 Scardale Crescent, Scarborough. Miss Sawyer was a former president of the Hull Students' Association, and had also been treasurer of the Hull Chemists' Association, of which body she was for a number of years on the committee.

MURPHY—BROOKS.—At the Church of the Assumption, Booters-town, co. Dublin, Michael Gerald Murphy, M.P.S.I., The Pharmacy, Mitchelstown, co. Cork, to Maisie Brooks, Ph.C.

TOMLINSON—RUDD.—At St. Edmunds Church, Whalley Range, Manchester, on September 7, John Tomlinson (a director, Joseph Brooks & Co., Ltd., wholesale chemists), Shudehill, Manchester, to Doris Rudd, 8 Powell Street, Old Trafford, Manchester.

DEATHS

BEESTON.—On September 7, Mr. Harry Beeston, M.P.S., Stoke-on-Trent. Mr. Beeston qualified in 1914.

BURR.—At the Manor Pharmacy, Kingskerswell, Devon, on September 22, Mr. William Walter Burr, M.P.S. Mr. Burr, who qualified in 1904, had for months past been unwell, but only seriously ill for a fortnight.

BUTTERFIELD.—Recently, Mr. Joseph William Butterfield, chemist and druggist, aged eighty-four. Mr. Butterfield was for many years in business in Darwen.

KERRIGAN.—In London, during an air raid, recently, Mr. Andrew Gerard Kerrigan, Ph.C., M.P.S. Mr. Kerrigan was well known among the younger members of the pharmaceutical profession in Belfast, and was a great favourite. He served his apprenticeship with the late Mr. T. Lavery, Mountpottinger, Belfast, and went to London after qualifying in 1937.

PAGE.—On September 1, Mr. Walter James Page, M.P.S., formerly of 179 Albert Road, Southsea. Mr. Page passed the Minor examination in 1901.

PATON.—Recently, Mr. Andrew Hunter Paton, M.P.S., Combe Down, Bath, aged sixty-three.

WHITE.—Recently, Mr. Charles Edwin White, M.P.S. Mr. White, who qualified in 1898, was for a time in business in Worthing and afterwards in Brixton, London, S.W.9.

PERSONALITIES

MR. THOMAS STODDART, M.P.S., P.O. Box 3, Ladysmith, Natal, who left this country for South Africa in 1937, has joined the Natal Carbineers.

MR. ARTHUR MORTIMER, who has for many years been the secretary of the Wholesale Drug Trade Association, and is also chairman of the Pharmaceutical Export Group, was the victim of enemy bombing on September 18. His numerous friends in all branches of the trade will be sorry to hear that he was severely cut and suffered from shock and is at present in hospital. The latest report states that he is progressing favourably, and is shortly to be evacuated to a country hospital. On behalf of the trade we extend to him and to Mrs. Mortimer congratulations on his escape and best wishes for his speedy recovery.

RECENT DEVELOPMENTS IN THERAPEUTICS

by F. Prescott, M.Sc., Ph.D., A.I.C., M.R.C.S., L.R.C.P.

VII.—The Sulphanilamides

History.—In 1904 Ehrlich summarised the aims of chemotherapy: "What we seek is 'specific chemotherapy,' that is we are in search of a drug which should be capable of destroying certain parasites without at the same time causing too much damage to the host." Since then chemotherapy has achieved remarkable success in the treatment of diseases caused by protozoa and spirochaetes, but is only during the last few years that substances have been discovered that are effective against the common pathogenic bacteria. In 1908 Gelmo prepared *p*-aminobenzenesulphonamide in the course of pure chemical research, and this compound, now known as sulphanilamide, is the parent substance of the sulphanilamide drugs. Hörlein, Dressel and Kothe, of the I.G. Farbenindustrie laboratories, prepared a number of textile dyes from azo compounds containing a sulphanilamide nucleus, and in 1935 Domagk found that one of these was effective in preventing death in mice infected with streptococci. This dye was later marketed as Prontosil, the first proprietary sulphanilamide preparation. At the same time Trefouel and his associates in France showed that several azo dyes prepared from sulphanilamide had an antistreptococcal action, and they advanced the view that sulphanilamide itself was the active part of the molecule. This led to the discovery that sulphanilamide was highly active as a therapeutic agent in experimental streptococcal infection.

Indications for Sulphanilamide Therapy.—The sulphanilamides are highly specific in action and cannot be used indiscriminately for the treatment of any bacterial infection. Broadly speaking they are effective in the treatment of acute infections due to certain strains of hæmolytic streptococci (β -strains), pneumococci, meningococci, and *B. coli*, although recent research has shown that they are of value in combating a number of diseases brought about by other organisms. The compounds are inactive in a medium full of pus, and are hence not usually effective in chronic infections, their use being reserved for the acute stage. Streptococcal infections in which the sulphanilamides have proved to be of considerable value are cellulitis, septicæmia, puerperal sepsis, otitis media, erysipelas, acute tonsillitis and streptococcal sore throat, peritonitis, streptococcal meningitis, mastoiditis, and scarlet fever (with antitoxin). For many years meningococcal meningitis or cerebrospinal fever has ranked as one of the most lethal of epidemic diseases, with a case mortality of 30 to 50 per cent. Sulphanilamide therapy has reduced this to under 10 per cent. Meningitis can also be due to tubercle bacilli, streptococci and pneumococci, and since sulphapyridine is effective against all these organisms (except tubercle) it is usually advisable to give this preparation, especially as the physician diagnoses "meningitis" at the bedside and not the causal organism. The pneumococcus can be the cause of lobar and broncho-pneumonia (usually a "mixed" infection), meningitis, peritonitis, otitis media and septicæmia. It has been found that the most satisfactory sulphanilamide for the treatment of pneumococcal infections is sulphapyridine, and since its introduction the outlook in the treatment of lobar pneumonia and pneumococcal meningitis has improved considerably. In the treatment of gonococcal infections cure is produced in 80 to 90 per cent. of cases under sulphanilamide therapy. Some authorities state that relapses occur, but this, of course, is true of any form of treatment. Claims are made that sulphathiazole and sulphapyridine are effective in the treatment of some staphylococcal infections, e.g. skin infections, carbuncles, and staphylococcal septicæmia. *B. coli* infections that respond to sulphanilamide therapy include pyelitis, urinary infections and genito-urinary infections of childhood. Reports on the value of the sulphanilamides in a number of other conditions have appeared in medical literature in the last year or two. These include trachoma, undulant or Malta fever, prophylaxis and treatment of wound infection and gas gangrene (local and oral treatment), endocarditis (with heparin), typhoid, and anthrax.

Mode of Action and Administration.—The mode of action of the sulphanilamides is uncertain. It is accepted, however, that they do not behave as local antiseptics in the blood stream and tissues, nor do they increase the defence mechanisms of the body by increasing the number of the white blood cells or stimulating antibody formation. It has recently been shown that bacteria need *p*-aminobenzoic acid as a nutrient and that this cannot be utilised in the presence of sulphanilamides. The latter may therefore act by preventing bacteria from using nutrient materials in human tissues. Sulphanilamide therapy must be instituted early and in sufficiently high dosage, so that the concentration in the blood is maintained at 10 mgm. per 100 c.c. for severe infections. This is attained by administering, in divided doses every four to six hours, a total of 1 gm. per day per 20 lb. of body weight. This corresponds to 7-8 gm. daily for an average ten-stone man. A convenient method of administration is to commence with three $\frac{1}{2}$ -gm. tablets and thereafter to give one $\frac{1}{2}$ -gm. tablet every four hours. Treatment should not be continued for more than fourteen days without a break.

Nomenclature.—All the sulphanilamides are derivatives of *p*-aminobenzenesulphonamide, $\text{H}_2\text{N}\cdot\text{C}_6\text{H}_4\cdot\text{SO}_2\cdot\text{NH}_2$.

CHEMICAL NAME	FORMULA	PROPRIETARY NAME
Sulphanilamide		Streptocide, Prontosil album, Sulphonamide-P, Prontylin, Colsulanyde
Sulphapyridine or 2-(<i>p</i> -aminobenzene-sulphonamido) pyridine or 2-sulphanilylamino-pyridine		M. & B. 693 Dagenan
Sodium sulphapyridine		M. & B. 693 soluble Dagenan sodium
4'-Sulphonamido-2:4'-diaminoazobenzene or sulphanido-chrysoidine		Prontosil rubrum
Disodium salt of 4'-sulphonamidophenyl-2-azo-1-hydroxy-7-acetylaminonaphthalene-3:6-disulphonic acid		Prontosil soluble, Prontosil, Rubiazol injectable
<i>p</i> -Benzylamino-benzene-sulphonamide (benzylsulphanilamide)		Proseptasine M. & B. 125
Disodium- <i>p</i> (<i>p</i> -phenyl-propylamino)-benzene-sulphonamide- α - γ -disulphonate		Soluseptasine M. & B. 137
4-(4'-aminobenzene-sulphonamido) benzene-sulphondimethylamide or sulphanilyldimethylsulphanilamide		Uleron Uleron Disseptal A
4'-Sulphonamido-2:4'-diamino-6-carboxy-azobenzene or 6-carboxysulphonamido-chrysoidine		Rubiazol
<i>p</i> -Aminobenzenesulphonacetamide		Albucid
Sulphathiazole or 2-(<i>p</i> -aminobenzene sulphonamido) thiazole		M. & B. 760 Ciba 3714

Other preparations that have been used are methylsulphathiazole, 4'-4'-diaminodiphenylsulphone, disulphanilamide, 4-nitro-4'-aminodiphenylsulphoxide, and sodium sulphanilylsulphanilate.

Toxic Reactions.—The commonest toxic effects that may follow the administration of the sulphanilamides are malaise, headache, dizziness, nausea, vomiting, "drug rash," and "drug fever." The last-named occurs on the seventh to tenth day. Blueness of the lips and ears may occur. More serious complications, which fortunately are rare, are blood in the urine, inability to pass urine owing to blockage of the kidney tubules, and agranulocytosis. Reactions may be minimised by avoiding purgatives and sulphur-containing foods, and by giving methylene blue in pill form (gr.i-ii t.d.s.) or injections of vitamin C (0.5 gm. daily) or of nicotinic acid (20-100 mgm. by mouth). Agranulocytosis, (pathological reduction in number of white blood cells) is treated by repeated injections of 10 c.c. of pentose nucleotide and by blood transfusions.



John Bell BRAND

COLD CURE CAPSULES

RETAIL 1/3 TRADE 9/- doz. boxes


JOHN BELL HILLS & LUCAS LTD
OXFORD WORKS, WORSLEY BRIDGE ROAD, S.E. 26.

OL. VITAMINATUM (A & D)

(Conforming with 2nd B.P. Addendum)

H. R. NAPP LIMITED

3 & 4, CLEMENTS INN, LONDON, W.C.2



THE POTENT BRAIN & NERVE TONIC FOR MEN

1/3 size - 7/6 doz.
2/3 - 13/6

THE
Acton Pill & Tablet Co Ltd
ASH VALE, SURREY.

FROM ALL SUNDRIES
HOUSES, OR -

'PANOPEPTON'

A FOOD FOR YOUNG AND OLD

'PANOPEPTON' is sustaining, palatable and acceptable to the most delicate stomach. Supplied in 12-oz. bottles.

Originated and Manufactured by

FAIRCHILDBROS. & FOSTER (Inc.)

New York and 65 Holborn Viaduct, London, E.C.1

Agents: **BURROUGHS WELLCOME & CO.**
London, Sydney, Cape Town

DISEASES AND REMEDIES. Price 7s. 6d., by post 7s. 10d.

A HANDBOOK TO PHARMACY. Price 5s., by post 5s. 4d

TRAGACANTH

SPECIALISTS IN B.P. POWDER

Also Technical and Industrial qualities. All Grades of Whole Flakes as imported. Samples and prices on request.

FREUDENTHEIL, SMITH & Co., 21 Mincing Lane, London, E.C.3
Tel. Address: 'Freudenruf' Tel.: MANsion House 6600 Estd. 1826

THE NATIONAL ASSOCIATION OF OPTICIANS

The next examination will be held at
Liverpool in January, 1941

REVISED SYLLABUS, ETC.

SECRETARY, N.A.O., 130 Princes Road, Liverpool, 8

BURROUGH'S
ALCOHOL
FOR TINCTURES

Write for Prices
JAMES BURROUGH Ltd., 1 Cale Distillery, Lambeth, S.E. 11

PATTINSON'S BRAND

Cream of Magnesia

Ask us to send you 12oz. sample bottle FREE

THE WASHINGTON CHEMICAL COMPANY
BRANCH OF TURNER AND NEWALL LIMITED
Washington Station, County Durham

A NEW AND REVISED Chart of War Gases IS NOW AVAILABLE

The latest information on this subject has been incorporated in the new edition of the C. & D. Chart of War Gases.

The Chart has been completely revised and new gases included. It is thus thoroughly up-to-date and provides in a concise and clear form a description of the chief poison gases—their effects and time action, and an outline of the First-Aid methods to be employed to casualties.

The reverse side of the Chart now contains important information on the detection of war gases.

Pharmacists will find it a useful guide in the course of their business. Customers interested in the purchase of air raid precautions goods will appreciate a copy for their own use.

Chemical manufacturers and firms engaged in all branches of the drug trade will find the chart of practical use in connexion with arrangements they make for air raid precautions, and it is suggested that copies of the chart should be distributed to their staffs. Reprints are available at the following prices, postage included:—

Printed on 1/Art Paper			Printed on White Card		
	s.	d.		s.	d.
12 copies ..	1	3	12 copies ..	7	9
25 copies ..	2	6	25 copies ..	5	0
50 copies ..	4	9	50 copies ..	7	9
100 copies ..	9	0	100 copies ..	13	6
250 copies ..	12	6	250 copies ..	21	6
500 copies ..	20	0	500 copies ..	32	6
1,000 copies ..	30	0	1,000 copies ..	52	6

Orders, together with remittance, should be addressed to The Publisher, THE CHEMIST AND DRUGGIST, 28 Essex Street, London, W.C.2.

N.P.U. WAR DISTRESS FUND

THE following is the second list of subscribers of amounts of £5 and over. Lack of space prevents inclusion of the names of those subscribing smaller amounts. The total contributed is now £10,373 15s.

RETAILERS.—£250, Boots Pure Drug Co., Ltd. (per Mr. W. Lee); £13 9s., Plymouth & District N.P.U. Branch; £10 10s. each, Wands, Ltd., Mr. G. A. Mallinson, and H. W. Herbert, Ltd.; £10 each, Messrs. Strode, Cosh & Penfold, and the Cardiff Pharmacists' Association; £6 6s., Messrs. Billington & Sons; £5 5s. each, Geo. Squire, Ltd., A. Q. Tucker & Co., Ltd., and Mr. M. W. Todd; £5 each, Messrs. F. A. Parkin, A. Cruikshank, W. Lea (Neave & Lea), A. Mortimer, W. Gwillim, L. W. Lester, E. M. Mellor, S. L. Rosenbaum, and H. H. & C. S. Wallwork.

WHOLESALEMAN AND MANUFACTURERS.—£1,000, May & Baker, Ltd.; £525, Allen & Hanburys, Ltd.; £500, Sangers, Ltd.; £262 10s., Glaxo Laboratories, Ltd.; £105, Ayrton, Saunders & Co., Ltd.; £100, Genatosan, Ltd.; £94 10s., Howards & Sons, Ltd.; £78 15s., W. R. Warner & Co., Ltd.; £52 10s., Whiffen & Sons, Ltd.; £26 5s. each, Corn Products Co., Ltd., Chesebrough Manufacturing Co., Ltd., and Richard Hudnut, Ltd.; £25 each, F. W. Hampshire & Co., Ltd., Horlicks, Ltd., Stemco, Ltd., Morgan Bros. (Publishers), Ltd., (THE CHEMIST AND DRUGGIST), Bleasdale, Ltd., and Raines & Co., Ltd.; £10 10s. each, Ex-Lax, Ltd., D.D.D. Co., Ltd., Kolynos, Incorporated, Evans, Gadd & Co., Ltd., Numol, Ltd., and Wyleys, Ltd.; £10, Robert Gibson & Sons, Ltd.; £5 5s. each, Beltona, Ltd., Herts Pharmaceuticals, Ltd., The Methylating Co., Ltd., and W. T. Owbridge, Ltd.

THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

for RETAILER — WHOLESALER — MANUFACTURER

Circulates throughout the Pharmaceutical, Chemical, Drug, Essential Oil, Perfumery, Cosmetic, Toilet Preparation and allied Trades and Industries in Great Britain, Eire, The British Empire and all foreign countries

Official organ of The Pharmaceutical Society of Ireland, The Pharmaceutical Society of Northern Ireland, The Chemists' and Druggists' Society of Ireland and of other Chemists' Societies in the Empire

VOL. CXXXIII

September 28, 1940

NO. 3164

CONTENTS

	PAGE		PAGE
Business Changes ..	168	Marriages ..	170
Canadian Army Pharmacists ..	175	Medical Abstracts ..	174
Company News ..	168	N.P.U. Distress Fund ..	172
Correspondence ..	178	News of the Week ..	165
Deaths ..	170	Parliamentary News ..	168
Empire and Foreign News ..	167	Personalities ..	170
Editorial Articles:—		Pharmaceutical Society of North-	
For the Common Good ..	173	ern Ireland ..	170
The Chancellor's List of Essen-		Recent Developments in Thera-	
tial Drugs ..	173	peutics ..	171
Personal Injuries from Air		Recent Research ..	174
Raids ..	173	Shop Windows in War-time ..	169
Commissioned Rank and Con-		Topical Reflections ..	167
fused Thinking ..	173	Trade Notes ..	168
		Trade Report ..	176

For the Common Good

ALL sections of the trade are having to contend with difficulties during the present critical phase of the war. Manufacturers and wholesale distributors have, on account of enemy action, had to make alternative arrangements in order to carry on their businesses and thus serve the public. Retailers have suffered similarly, but, wherever dislocation has occurred, there has arisen a spirit of determination by both employers and employees to carry on, and immediate offers of assistance have been forthcoming from firms who have been more fortunate. All sections of the trade have shown a spontaneous desire to do everything possible to ensure a full service of production and distribution of the products of the industry. It is this splendid spirit that has already resulted in ensuring there will be no serious breakdown in the trade. It may be said that the pharmaceutical chemical trade and industry has suffered at the hands of Nazi frightfulness, but its service to the public and to industry generally continues today unimpaired. In these stirring times, when the enemy is employing foul as well as fair means to achieve the dislocation and disruption of industry in this country, THE CHEMIST AND DRUGGIST has its responsibilities and duties to perform. Whatever the circumstances the *C. & D.* will continue to be published, and it will, as it has done for over eighty years, serve the trade to the best of its ability as its trade newspaper.

In order to assist employees who have been put out of employment either through enemy action or through businesses being closed down in defence areas, we are instituting a scheme of free advertisements in the "Situations Wanted" in the *C. & D. Coloured Supplement*. Any such employee of a retail pharmacist, whether he or she be qualified or not, or any employee of works producing or distributing pharmaceutical chemicals, drugs, perfumery, cosmetics, toilet goods, etc., is invited to make full use of this facility without charge. Advertisements should be accompanied by brief particulars of last employment and cause of its termination, and should be addressed to the Publisher, The Pitman Press, Bath. We feel there is no need to appeal to employers to support this scheme. If they have vacancies they will welcome the opportunity of providing the desired employment.

The Chancellor's List of Essential Drugs

Most of our subscribers will have read with amazement the proposed list of "essential drugs of an exceptionally costly character" which shall be exempted from the Purchase Tax." (*C. & D.*, September 21, p. 147.) It is at once obvious that with, say, four exceptions, consideration has been given almost exclusively to the articles used in hospitals and institutions. It is not clear at the moment whether it is intended that this list shall virtually comprise all the drugs the Government is prepared to exempt from the Purchase Tax and so be subject to only slight amendment or whether sympathetic consideration will be given to the

representations of the large number of interested parties. We hope the latter purpose is correct and that when the list finally becomes law it will be greatly augmented. The discussions in Parliament, which were fully reported in the *C. & D.*, certainly conveyed the impression that, while the Chancellor would not accept an amendment excluding patent medicines, he was prepared to meet any reasonable demands put forward.

The only guide available as to the possibility of a drug being added to the exempted list is that it shall be an essential one and also of an exceptionally costly character. To comply with the one requirement and not with the other is apparently not sufficient. The vagueness of these conditions is also to be deplored for, as has been previously pointed out, what is a comparatively inexpensive drug for one person may be very costly for another. It is not only liver extracts and insulin that have to be taken throughout long periods and with regularity, as every chemist knows, and customers from necessity for such preparations are all too frequently to be found among the poor classes of the community. Sir Kingsley Wood, in the Purchase Tax discussions, quoted the annual reports of the Chief Medical Officer of Health to show that far too much medicine is swallowed by the public, but that is a generalisation, and is not the criterion on which to decide what should be taxed unless the specific object of that tax is to limit the total consumption of medicine. If this is one of the aims of the Chancellor he has not made it clear. In our view the list should not be compiled exclusively from the doctor's standpoint. The omission of vitamin products, to mention only one class, is surprising, particularly in view of the Government's special interest in these substances. Another way in which the Government is concerned is through Insurance Act Dispensing, as the cost of drugs is likely to be increased by some 15 per cent. This in turn means that chemists' outlay for Insurance drugs will also be 15 per cent. more, though the dispensing fees will remain unchanged.

Personal Injuries from Air Raids

LIABILITY of employers in respect of their employees who might be injured while working during an air raid has been the subject of many discussions and there appears to have been confused thinking on both sides. The revised arrangement of regarding the public warning as an "alert" signal and working until a "spotter" gives a further warning has brought the matter to a head so far as factories are concerned. Pharmacists, too, have been concerned as to their position regarding a customer who might be injured in the pharmacy as the result of enemy action, such as the windows being blown in.

The Parliamentary Secretary to the Ministry of Pensions (Miss Ellen Wilkinson) has now clarified the position. Under the Personal Injuries Act, 1939, the relief for the owner or occupier of premises from liabilities for war injuries is complete. The shopkeeper and factory owner are under no liability if they permit customers to remain or men to work during a raid. The Government has shouldered complete liability for war injuries for the worker. The scheme for war injuries has nothing to do with the Workmen's Compensation Act, but is a scheme by itself, with very simple regulations, administered by the Minister of Pensions of a Government which has appealed to the workers to stay at work so long as they reasonably can after the sirens have sounded and to get back to work even before the "All Clear," once the imminent danger has passed. In asking this the Government does not want workers to run risks that are foolhardy. The Ministry of Pensions is to look after the casualties and their dependants with all the sympathy and consideration due to those who have stood by their duty on the eve of their country's triumph. Arrangements have also been made by the Government to safeguard the workers' rights under insurance policies.

Commissioned Rank and Confused Thinking

THE letter of a correspondent in a recent issue of the "South African Pharmaceutical Journal" deserves comment in these columns because it expresses a fallacy not, alas, confined to that Dominion. In what, to judge by his signature ("Just a Chemist") and manner of writing, he evidently considers a vein of "sweet reason," the writer states:—

The average pharmacist seems to consider himself . . . a man who, joining the army, should automatically receive a commission. I wonder why? . . . Take my own case. I attended a minor public school. So did a friend of mine, the son of a confectioner. We left school and I went to serve an apprenticeship in a chemist shop. He to a confectioner's shop. . . . Eventually I attended the same "tech" full time for twelve months for Part II. Here I again met my confectioner friend, also taking a course of study in his particular subject. We both passed out together "masters" of our own professions. Now comes the war. Am I a better man than my friend the confectioner, now the owner of several very prosperous businesses? I think not. Yet how many of my chemist friends would consider my confectioner was entitled to join the army as an officer? No more than any of his confectioner friends, or anyone else with any sense, thinks I am a suitable applicant for a commission.

"Just a Chemist" makes the cardinal error of supposing that pharmacists demand commissioned rank in the Army because of superior

education. We do not believe this is so, and certainly the organised bodies representative of pharmacy have never made such an exaggerated claim. What they urge is something quite different. It is that pharmacists in the Army medical service (in this country the Royal Army Medical Corps) should have such rank at least as ensures that they will not be called upon by others untrained in pharmacy to carry out orders affecting their pharmaceutical duties that stultify their pharmaceutical knowledge. To attempt to draw an analogy with the case of the correspondent's confectioner friend is difficult, because there is not in the Army a specialised confectionery regiment corresponding to the specialised Royal Army Medical Corps, but the situation may be explained in the following way. Suppose there were a Royal Army Bread Corps, and that the confectioners held in that service an ancillary relation to master bakers, in much the same way as pharmacists are ancillary to the medical profession. Then we should join in urging for our friend the confectioner such rank as would prevent his being faced with the choice of carrying out orders that his professional training teaches him to be technically wrong or impracticable, or of committing an act of insubordination to a superior officer by criticising them. Pharmacists in the Army proper are on the same level as all other citizens, and must gain promotion by the usual channels, but those in the Medical Corps are highly trained in a particular activity and deserve rank accordingly.

In this connexion we may record that pharmacists in Alberta, Canada, acting on behalf of all Canadian pharmacists, have been energetic in placing their case before the military authorities, and that their efforts have been substantially rewarded. Details of the extent of their new recognition are given on the opposite page, and so far as we are aware the Alberta committee is correct in its claim that pharmacists have now a higher status in the Canadian army than in any other military Services in the British Empire. We congratulate the members of the committee on the thoroughness with which they presented their case and hope that their example will not be lost on British pharmacists.

MEDICAL ABSTRACTS

Histaminase in Allergic Dermatoses.—The discovery of an enzyme which specifically inactivates histamine has suggested its use in the treatment of allergic cutaneous disorders, and Goldberg reports his observations on a series of thirty-five patients with various allergic disturbances who have been treated with histaminase ("Journal of the American Medical Association," August 10, p. 429). It has been shown that there is a release of so-called H substance in the blood during allergic shock and that this H substance may be histamine. Histaminase is a compound of physiologic albuminoid substance obtained from the intestinal mucous membrane. It is a loose white powder which is stable and dissolves in water to a slightly opalescent fluid. This preparation is put up as a dry powder of two histamine detoxicating units and in enterically coated tablets of five units. The unit is the amount necessary to inactivate 1 mgm. of histamine during twenty-four hours' incubation at 37 C. in a phosphate buffer solution at a pH of 7. Twenty-five of Goldberg's patients received histaminase by mouth, subdivided as follows: thirteen had recurrent urticaria, three had allergic eczema, one had papular urticaria and three had pruritus. Ten patients with recurrent urticaria received intramuscular injections of histaminase 2 c.c. every other day for a minimum of six injections and a maximum of twelve. The initial reactions of fever, malaise and joint pains following intramuscular injections of histaminase in 2 c.c. doses suggests the possibility of a foreign protein reaction. Out of the total of thirty-five cases there was partial or complete improvement noted in all but nine of the patients treated. Goldberg draws no definite conclusions regarding the dosage of histaminase, since each case must be studied individually. He records, however, that as yet no untoward reactions have been noted after patients have taken as much as 150 histamine detoxicating units daily for four or five days. Patients receiving intramuscular injections of histaminase had very much better results than those receiving the enzyme in tablet form. The first four injections elicited symptoms comparable to those following foreign protein shock therapy. This group of thirty-five cases is too small to permit dogmatic statements. Nevertheless evidence has been presented showing that histaminase oxidises histamine in the body and on this basis its therapeutic assistance in the treatment of allergic dermatoses may be justifiable.

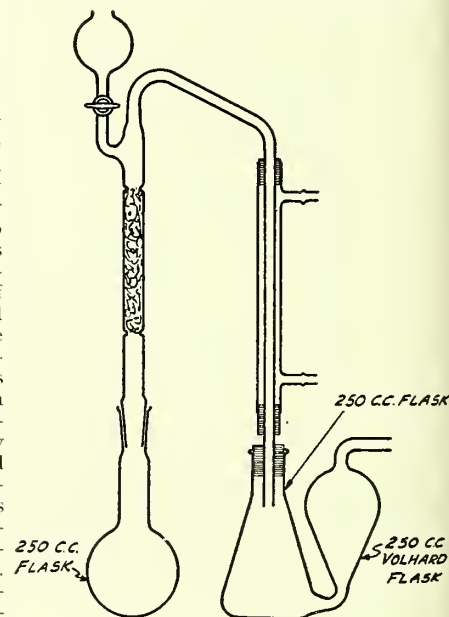
Gun-Fire Deafness.—A study has been made by Passe ("British Medical Journal," August 31, p. 295) of a number of cases of deafness due to gun-fire and bomb explosions among naval personnel. He finds that the condition occurs at any age in individuals without any history of deafness or middle-ear infection. In the majority of cases the type of gun responsible has been the 3-in., 4-in., 4.7-in. or salute gun, the 4.7-in. being the worst offender. The majority of persons affected were using cotton-wool ear-plugs, but these may have been loosely inserted. There were no cases in which rubber ear-plugs had been worn. The symptoms were a brief state of "auditory daze" during which a high-pitched ringing was usually noted. Often a finger put to the ear to alleviate the deafness was bloodstained on withdrawal. The loss of

hearing is usually marked for the first twenty-four to forty-eight hours, the hearing returning gradually, while the tinnitus subsides. The author deduces that while no-one is immune, gun-fire deafness is more prevalent when there are no adequate ear plugs and where protection is lacking from direct blast by a gun shield or, in a bomb explosion, by the wall of a house, etc. Cotton-wool plugs, when hastily rammed into the ears, appear to give inadequate protection. The author strongly recommends the use of rubber ear plugs. [A note on ear-plugs of various kinds appeared in last week's issue of the C. & D., p. 157.] He urges that if blood is seen in the meatus, syringing is to be avoided until the rent in the membrana has healed—a process that may require as long as fourteen days. In the meantime, two or three drops of guttae spt. vini rect., instilled twice a day, are all that is necessary. If wax is present a little olive oil may be instilled, but no attempt should be made to remove it by syringing.

RECENT RESEARCH

Chemical Aspect of Grassland Improvement.—For some years a considerable amount of research has been carried out in Scotland on the question of grassland improvement—in particular of very poor soil without grassland, and analyses have been carried out on a large number of soil samples from experimental areas. Robertson, who gives the result of his investigations in this field in the "Scottish Journal of Agriculture," Volume 23, No. 1, 1940, states that his study of the soil analytical data makes it clear that long-continued grazing removes much of the calcium and nearly all of the phosphorus from the soil, while the potassium is largely retained. In addition, he finds that calcium is not strongly held in the soil complex and is readily exchanged and removed by leaching. This results in increased acidity followed by the appearance of soluble iron and aluminium which in turn combine with more phosphorus and render it valuable. He suggests, therefore, that the first step is to make good deficiencies of calcium and phosphorus by liming and slagging. On the majority of fields, this has meant the application of about one ton per acre of ground lime and up to 1,000 feet per acre of basic slag. Potassic fertiliser may be required in the second year, and the dressing should be arrived at after analysis.

Analysis of Sodium Acetate.—A common method for the determination of acetic acid in acetates has consisted in distillation from a strongly acid solution and titration of the distillate. Certain workers have reported difficulty in assaying sodium acetate by this process. They found it necessary to maintain the volume of liquid being distilled at 200 cc. and to carry out the distillation over a period of ten hours to prevent high results from carry-over of phosphoric acid. In view of the troubles experienced by these workers the apparatus used, procedure and the results obtained with known amounts of sodium acetate and acetic acid by Hitchens, Ashworth and Demaree have been described by these authors ("Journal of the American Pharmaceutical Association," xxix.8.360). The distillation apparatus employed is illustrated. It consists of a 250 cc. round-bottom flask connected by means of a ground-glass joint to a spray column filled with small glass helices which in turn leads to a condenser. A small reservoir is fitted to the top of the column to allow addition of water to the flask. The receiver is a 250 c.c. Volhard absorption flask. Sufficient sample to contain about 0.02 gm. molecules of sodium acetate is added to the flask, along with 50 c.c. of water and 15 c.c. of 85 per cent phosphoric acid. Twenty c.c. of water are added to the receiver to act as a seal. The solution is distilled to a volume of about 20 c.c., the flame removed, 20 c.c. of water run in through the reservoir, and the solution again distilled to 20 c.c. For safety a second 20 c.c. portion of water is added and distilled as before. The distillate is titrated with carbonate-free N/2 sodium hydroxide solution, using phenolphthalein or thymol blue as indicator. The distillation takes only twenty minutes, and the analysis carried out in forty-five minutes.



CANADIAN ARMY PHARMACISTS

A REPORT has recently been issued by a special Committee on the Status of Pharmacists in the Canadian Army, in which it is claimed that, as a result of the Committee's efforts, Army pharmacists are receiving more recognition in Canada than in any other part of the British Empire. The report is given fully in the "Canadian Pharmaceutical Journal," August 15, p. 462. The Committee was set up in October 1939, at the instigation of the president of the Alberta Pharmaceutical Society (Mr. Norman Scott), who held the view that something could and should be done to secure commissions for pharmacists in the Canadian Army despite the fact that, as recently beforehand as October 4, 1939, a delegation that had interviewed the Director-General of Medical Services reported that there was little hope of success in this direction. The chairman of the Committee is Lieutenant-Colonel F. A. Stewart-Dunn, and among the four other members is a military captain. On October 30, 1939, the Committee sent a communication to the Director-General of Medical Services at Ottawa, in which it made the following statements: "The Permanent Force in Canada in peace time employs a number of men at central points to act as dispensers under the supervision of the Medical Officer. The active-service Force of the Canadian Army is working under much more strenuous conditions than in the last war, and it would appear that the status of the pharmacists in the Army should now be changed. The Department of Pensions and National Health rigidly insists that no narcotics, poisons, etc., may be dispensed by 'any but registered pharmacists who have graduated from recognised schools of pharmacy in our Canadian Universities,' and it is urged that the time has arrived when the same protection should be given to sick soldiers as to the ordinary civilian. Before a man can enter the pharmaceutical profession as an apprentice he must have completed senior matriculation, must have served three years' apprenticeship and must have passed examinations in pharmacy and materia medica at the end of each year's apprenticeship before he can continue. At the expiration of this three years' apprenticeship he is eligible to enter a recognised college of pharmacy, at which the course includes pharmacy, materia medica, chemistry, analytical chemistry, biochemistry, bacteriology, accountancy, zoology, toxicology and physiology—a fact that makes pharmacists specially qualified for other medical work in the Army besides dispensing. They are qualified to do water analysis and treatment, urine analysis, gas instruction, etc., and are the logical persons to have charge of the purchasing of drugs, dressings and surgical equipment for the medical stores of the Canadian Army. The examinations at present taken by Army dispensers are on a par with those taken by pharmacy apprentices during their first two years of apprenticeship and before entering on their University training. In the last war, pharmacists were employed in various units, including field ambulances, casualty-clearing stations, base and stationary hospitals and gas schools with the rank of staff-sergeant, or sometimes lower, but with no emphasis on their qualifications. We recommend that qualified pharmacists be employed in the above units with the same commissioned rank, pension privileges, pay and promotion as medical and dental officers. We also recommend that a Canadian Army Pharmaceutical Corps be authorised, from which unit pharmacists could be attached to medical units in the same way as officers from the Canadian Army Dental Corps organised in 1915."

Detailed Plan Offered.—The Committee followed up this communication with a detailed suggestion as to the establishment of a Canadian Army Pharmaceutical Corps. It was recommended that the Corps should consist of the following establishment:—

SUGGESTED ESTABLISHMENT

<i>Director of Pharmaceutical Services</i>	Colonel or lieutenant-colonel.
<i>Deputy Director of Pharmaceutical Services</i>	Lieutenant-colonel or major.
<i>For field ambulances (150 patients)</i>	One commissioned officer (captain or lieutenant). One non-commissioned officer (staff-sergeant).
<i>For casualty-clearing stations (200 sick and wounded)</i>	One commissioned officer (captain or lieutenant). One non-commissioned officer (staff-sergeant).
<i>For general hospitals (600 beds)</i>	One commissioned officer (captain or, if over 600 beds, major). Two non-commissioned officers (one second-class warrant officer and one staff-sergeant).
<i>For advance depôt of medical stores</i>	One commissioned officer (major or quartermaster). Two non-commissioned officers (one second-class warrant officer and one staff-sergeant).

For base depôt of medical stores

Two commissioned officers (one lieutenant-colonel or major, one captain).

Four non-commissioned officers (one first-class and one second-class warrant officer and two staff-sergeants).

For hospital ships (500 beds)

One commissioned officer (captain or lieutenant).

Two non-commissioned officers (staff-sergeants).

For convalescent depôts (2,000 men)

One commissioned officer (captain).

One non-commissioned officer (staff-sergeant).

For gas schools

One commissioned officer, if qualified for gas instructions (captain or lieutenant).

Two non-commissioned officers (if qualified as above, two staff-sergeants).

Success So Far Achieved.—The Committee's report goes on to state that, although the members were not optimistic that the whole of their requests would be granted at the first asking, the newly-appointed Director-General of Medical Services took action only four days after his appointment, issuing instructions that all medical units throughout Canada should send names of qualified pharmacists and pharmaceutical apprentices who had enlisted in the Canadian Army. From that time further changes were introduced. The Committee held more than two dozen meetings, and sent one of its members to interview the president of the Canadian Pharmaceutical Association. Already a large proportion of the Committee's requests have been acceded to, as will be seen from the following establishment list:—

ESTABLISHMENT INSTITUTED

<i>Central medical stores</i>	One major, one captain, one other qualified pharmacist, four warrant officers or non-commissioned officers.
<i>Advance-depôt medical stores</i>	One major, one non-commissioned officer.
<i>Base-depôt medical stores</i>	One major or captain, one non-commissioned officer.
<i>General hospital (1,200 beds), per hospital</i>	One lieutenant, three non-commissioned officers.
<i>(600 beds), per hospital</i>	One lieutenant, two non-commissioned officers.
<i>Medical stores in military districts</i>	Eleven lieutenants (who will be quartermasters). Eleven non-commissioned officers.
<i>Field ambulances</i>	Two non-commissioned officers per field ambulance.
<i>Casualty-clearing stations</i>	Two non-commissioned officers per station.
<i>Hospital ships</i>	Two non-commissioned officers per ship.
<i>Convalescent depôts</i>	One non-commissioned officer per convalescent depôt.

All commissioned officers must henceforth be fully qualified pharmacists, graduates of recognised schools of pharmacy and licensed to practise in Canada. Non-commissioned officers must be registered pharmaceutical apprentices of two or more years' standing or qualified pharmacists if they wish to join as non-commissioned officers. Schools of pharmacy and registrars of local pharmaceutical associations will be asked by National Defence Headquarters for recommendations as to the suitability of candidates before appointments are granted. In military districts where quartermasters are at present employed who are not pharmacists, re-posting will be carried out as soon as possible and the positions will be filled by registered pharmacists. All warrant and non-commissioned officers will receive an extra 75 cents per day special pay in addition to the ordinary rates of pay for their rank.

Principle Established.—The Committee's report concludes that, although at present the number of pharmacists affected is not large, the principle has at least been recognised by National Defence Headquarters that the pharmacist, as a professional man, is entitled to hold commissioned rank.

"SWAYBACK" IN LAMBS.—The nature, cause and prevention of "swayback" in lambs are described in an Advisory Leaflet (No. 301) issued by the Ministry of Agriculture (H.M. Stationery Office, 1d.).

TRADE REPORT

Spot quotations recorded for pharmaceutical chemicals, crude drugs, essential oils, etc., represent the prices for wholesale quantities of standard quality. C.i.f. shipment quotations do not include marine war risk insurance and other abnormal charges which arise in the present emergency.

28 Essex Street, W.C.2, September 25

THE generally quiet tone previously noted continues, and business during the past week has been only moderate. Prices, however, are generally well maintained, and a few increases in quotations are recorded. Makers and dealers report quiet conditions in the PHARMACEUTICAL CHEMICALS markets, and few price changes have been notified. AMIDOPYRINE continues firm. Supplies of BENZALDEHYDE and BENZOIC ACID remain difficult. Quotations for QUININE are unchanged. Convention prices for SANTONIN are at unaltered levels. SULPHANILAMIDE is steady and unchanged.

Crude Drugs

Many items continue to attract a fair amount of business, particularly for the home consuming trade, but the general demand for crude drugs is quiet, though prices of most commodities remain fully steady. A fair amount of spot business is reported in AGAR, but no shipment offers are available from the source. Conditions in the Curaçao ALOES market are firm, and spot quotations are at higher figures. BALSAM TOLU is now scarce, and quotations are nominal. BUCHU is unchanged and quiet. Business in CAMPHOR continues to be of average proportions. Not much business is moving in CLOVES, and quotations are about level on the week. DESICCATED COCONUT is again reported firmer. Quoted values for GINGER are steadily maintained. Slightly easier spot conditions are reported for Kordofan GUM ACACIA; new crop for shipment continues nominal. The London market has experienced a rather better demand this week for HONEY, but supplies of all descriptions are limited. A fair volume of business is being done in IPECACUANHA at full prices. Chinese MENTHOL tends slightly dearer on spot. The London spot quotation for MERCURY is unchanged; a recent consignment from America is reported to be disposed of, but further supplies from this and other sources are expected. WHITE PEPPER is quoted a fraction dearer on spot. A parcel of the usual varieties of Shensi RHUBARB is reported available. RUBBER is a fraction easier on the week. BEESWAX is quoted dearer on spot.

Essential Oils

The demand for these products continues rather quiet, with spot values showing but little change. Business in oils for winter use is expected shortly to become rather more active, and reasonably good stocks are reported to be available. Inquiry for ANISE (STAR) is fair, and the market is firm. Spot values of BERGAMOT continue nominal, and prices would have to be negotiated. Spot supplies of BOIS DE ROSE are limited, and the price is firm. CASSIA is firm but demand is of modest dimensions. Madagascar CLOVE is reported firmer on spot. EUCALYPTUS continues at about the same level as that reported last week. There are no shipment offers for GERANIUM. No quotations are available for Sicilian LEMON, but British makers are offering artificial substitutes at attractive prices. LEMONGRASS is neglected. West Indian LIME is steady. Business in French Guinea ORANGE has been on a modest scale and values are well maintained. PALMAROSA continues firm. Japanese PEPPERMINT has sold quietly, but only small supplies are now available; demand for Chinese has been quite good. PETITGRAIN is firm, and no shipment offers are reported. WORMSEED is steady and unchanged.

Exchange Rates on London

The following is a list of the chief Continental and other exchange rates at the opening on Wednesday morning:—

Centre	Quoted	Par	September 18	September 25
Belgian Congo ..	Frs. to £	nominal	176½*	176½*
Buenos Aires ..	Paper pesos to £	—	17.02*	17.02*
Java ..	Florins to £	12.107	7.60*	7.60*
Lisbon ..	Esc. to £	110	100.0*	100*
Madrid ..	Ptas. to £	25.24½	37.25	37.25*
Montreal ..	Dols. to £	4.86½	4.45*	4.45*
New York ..	Dols. to £	nominal	4.03*	4.03*
Shanghai ..	Per dollar	—	3½d.	3½d.
Stockholm ..	Kr. to £	18.150	16.90*	16.90*
Yokohama ..	Per yen	2s.	1s. 1½d.	1s. 2½d.
Zurich ..	Frs. to £	22.2115	17.70*	17.70*

* Rate fixed by Bank of England. Bank rate, 2 per cent.

Pharmaceutical Chemicals, etc.

BUSINESS in these markets has been quiet, with no important price changes to record.

AMIDOPYRINE.—Market firm; dealers' spot prices unchanged. One cwt., about 27s. 6d. per lb.; smaller quantities, up to about 30s. per lb. for crystals, with powder 3d. per lb. extra.

AMMONIUM ICHTHIOSULPHONATE.—Dealers are quoting spot material in one-cwt. lots, in 14-lb. tins, at about 5s. per lb., ex store.

ATROPINE.—The following are makers' prices: ALKALOID, 21s. per oz.; 4 oz., 20s. 6d., and 25 oz., 20 per oz. SULPHATE, 16s. 6d. per oz.; 4 oz., 16s., and 25 oz. 15s. 6d. per oz.
Bottles, under 5 gm. or ¼ oz., corked, 3d.; stoppered, 5d.; 5 gm. to 25 gm. or ¼ oz. to 1 oz., corked, 3½d.; stoppered, 6d.; 25 gm. or 1 oz., corked, 3½d.; stoppered, 7½d.; 50 gm. or 2 oz., corked, 4d.; stoppered, 9d. each; 100 gm. and over, included in price; tubes, per 100, 5-gr., 10s. 6d.; 10-gr., 12s. 3d.; 15-gr., 14s.

BARBITONE.—Dealers are quoting spot supplies as follows: One cwt., 22s. per lb.; 28 lb., 23s.; smaller quantities, up to 26s., per lb.; ex store.

BENZALDEHYDE.—Continues firm, with spot supplies severely limited. Makers are quoting a nominal price of from 3s. per lb.

BENZOIC ACID (B.P.).—Makers' price continues nominal at between 2s. 6d. and 3s. per lb., according to quantity. Supplies are difficult.

BENZYL BENZOATE.—Between 2s. 9d. and 3s. per lb. is the nominal price quoted by makers, according to quantity.

BORAX (B.P.).—No change in makers' prices: Granulated, £31; crystals, £32; powder, £32 10s. per ton, in 1-cwt. bags, carriage paid in Great Britain, for minimum one-ton lots. Commercial quality, £8 per ton less.

BORIC ACID (B.P.).—Steady and unchanged; makers' quote as follows: Granulated, £45 10s.; crystals, £46 10s.; powder, £47 10s. per ton, in cwt. bags, carriage paid in Great Britain, for minimum one-ton lots. Commercial qualities, £8 per ton less.

BROMIDES.—Steady at makers' prices. POTASSIUM, B.P., not less than 5 cwt., 2s. 2d. per lb.; 1 cwt., 2s. 3d.; 28 lb., 2s. 9½d. SODIUM, B.P., not less than 5 cwt., 2s. 4½d. per lb.; 1 cwt., 2s. 5½d.; 28 lb., 3s. AMMONIUM, B.P.C., not less than 5 cwt., 2s. 5½d. per lb.; 1 cwt., 2s. 6½d.; 28 lb., 3s. 1d. Net. Rise-and-fall and re-sale clauses apply. Without engagement. Special prices for larger quantities. 28-lb. parcels and 1-cwt. cases or kegs free.

CALCIUM LACTATE.—Business slow. Makers are quoting up to 1s. 8d. per lb. for small quantities.

CITRIC ACID.—No change in makers' nominal price of 1s. 2d. per lb., less 5 per cent. discount. Dealers would require about 1s. 6d. per lb.

CREAM OF TARTAR (B.P.).—Makers are quoting a nominal price of 15s. per cwt., less 2½ per cent. discount. Supplies are restricted to regular consumer customers.

CREOSOTE (BEECHWOOD).—Bulk quantities, in 25-kilo demijohns, are quoted by dealers at about 6s. upwards per lb.

EMETINE HYDROCHLORIDE.—From 100s. to 104s. per oz., according to quantity, is the present price quoted by makers.

EPHEDRINE HYDROCHLORIDE (B.P.).—Values range from 7s. to 8s. per oz. for ordinary quantities. Lots of 1,000 oz. would be at a slightly lower figure.

GUALACOL CARBONATE.—Steady and unchanged; makers' and dealers' quotations range between 12s. 6d. and 13s. per lb., ex store, according to quantity.

IODIDES.—Makers' prices are as follows: POTASSIUM, B.P., not less than 1 cwt., 8s.; 28 lb., 8s. 6d.; 14 lb., 9s.; 7 lb., 10s. 2d.; 4 lb., 10s. 8d.; smaller quantities, 11s. 2d. per lb. SODIUM, B.P., not less than 28 lb., 8s. 10d.; 14 lb., 9s. 4d.; 7 lb., 10s. 9d.; 4 lb., 11s. 5d.; smaller quantities, 12s. 3d. per lb. IODINE, B.P., RESUB., not less than 1 cwt., 9s. 2d.; 28 lb., 9s. 7d.; 14 lb., 10s. 2d.; 7 lb., 11s. 7d.; 4 lb., 12s. 3d.; smaller quantities, 13s. per lb. IODOFORM, B.P. (CRYST., PRECIP. OR POWDER), not less than 28 lb., 11s. 4d.; 14 lb., 11s. 10d.; 7 lb., 13s. 9d.; 4 lb., 14s. 7d.; smaller quantities, 15s. 5d. per lb. Contracts for 1 cwt. and upwards (assorted if desired) for delivery as required during three months, with the following clause: Price applicable to any delivery is that in force on date of dispatch. One-cwt. cases charged extra; 28-lb. tins 2s. each and non-returnable. All bottles charged for but credited in full if received back carriage-paid in good condition within three months. Carriage paid on any quantity. Assorted quantities charged for at collective total prices on orders for 14 lb. and upwards. It is a condition of sale that buyers undertake not to re-sell any quantity at prices or terms below scale for such quantity current at time re-sale is made.

LACTIC ACID (B.P.).—Rather quiet demand; market steady. Quantities, in 1-cwt. carboys, about 1s. 8½d. per lb.; in winchesters and bottles, about 1s. 9d. to 2s. per lb., ex store, according to quantity.

MERCURIALS.—No change in controlled prices for these salts:—

Mercury Compound	Over 7 lb. but less than 28 lb.	28 lb. and over but less than 1 cwt.					1 cwt. and over but less than 5 cwt.					5 cwt. and over				
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bichloride, powder	12 8	12 4	12 3	12 2	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0
Bichloride (industrial users)	12 8	12 4	12 3	12 1	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0	12 0
Bichloride, lump	13 3	12 11	12 10	12 9	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6
Ammonium bichloride, powder	14 7	14 3	14 2	14 1	13 7	13 7	13 7	13 7	13 7	13 7	13 7	13 7	13 7	13 7	13 7
Ammonium chloride, lump	14 5	14 1	14 0	13 11	13 5	13 5	13 5	13 5	13 5	13 5	13 5	13 5	13 5	13 5	13 5
Chloride (mercurous)	15 0	14 8	14 7	14 6	14 4	14 4	14 4	14 4	14 4	14 4	14 4	14 4	14 4	14 4	14 4
Oxide, red crystalline, B.P.	16 9	16 5	16 4	16 3	16 1	16 1	16 1	16 1	16 1	16 1	16 1	16 1	16 1	16 1	16 1
Oxide, red levigated, B.P.	16 3	15 11	15 10	15 9	15 9	15 9	15 9	15 9	15 9	15 9	15 9	15 9	15 9	15 9	15 9
Oxide, red technical
Oxide, yellow levigated, B.P.	16 2	15 10	15 9	15 8	15 8	15 8	15 8	15 8	15 8	15 8	15 8	15 8	15 8	15 8	15 8
Oxide, yellow technical

Packages free for quantities of 28 lb. and over; delivery free on orders of £20 and over.

MERCURY IODIDES.—Makers' prices per lb. are steady, as follows: RED, less than 7 lb., 17s. 8d.; not less than 7 lb., 17s. 4d.; not less than 14 lb., 16s. 10d. GREEN, less than 7 lb., 19s. 6d.; not less than 7 lb., 19s. 2d.; not less than 14 lb., 18s. 8d. YELLOW, less than 7 lb., 21s. 3d.; not less than 7 lb., 20s. 11d.; not less than 14 lb., 20s. 5d., net, carriage paid.

METHYL SULPHONAL.—Spot is quoted at about 40s. to 42s. 6d. per lb., ex store, for small quantities. Business is slow.

PARALDEHYDE.—The value of spot is at about 11d. to 1s. per lb., in 1-cwt. carboys, according to quantity.

PHENACETIN.—Makers' prices steady. Ordinary quantities, about 3s. 9d. to 4s. per lb., without engagement. Dealers' prices firm at from 7s. 6d. to 8s. per lb.

PHENAZONE.—Business quiet; bulk quantities on spot, about 17s. 6d. per lb., with smaller lots at up to 22s. per lb., ex store.

QUININE.—Quotations for sulphate are now at 59.85 American dollars per 100 oz., f.o.b. Java. The sterling quotation for sulphate, at current exchange rate, is now £14 17s. 5d. per 100 oz., f.o.b. Java.

SACCHARIN.—550 material continues at the Convention rate of 98s. 4d. per lb., duty paid. Neither wholesale nor retail prices are under Government control.

SALOL.—Remains firm, with quotations at about 7s. to 7s. 6d. per lb., according to quality.

SANTONIN.—No change in Convention prices: 15 kilo and over, £35 10s.; not less than 10 kilo, £30 5s.; not less than 5 kilo, £37; less than 5 kilo, £38 per kilo, delivered free in the U.K.; 1-kilo tins free.

SODIUM BENZOATE.—Makers' prices continue nominal at between 2s. 3d. and 2s. 6d. per lb., according to quantity. Supplies are likely to be short for some time ahead.

SULPHANILAMIDE.—Market quoted steady and unchanged. Spot, between 10s. 3d. and 11s. 6d. per lb.

SULPHONAL.—Firm and unchanged. Dealers quote prices of between 34s. and 37s. 6d. per lb., according to quantity.

TARTARIC ACID (B.P. CRYSTALS).—No change in makers' nominal quotation of 2s. 0½d. per lb., less 5 per cent. discount, with supplies reserved for regular consumer customers. Foreign material would be valued at about 3s. 4d. to 3s. 5d. per lb.

VANILLIN.—Makers' prices steady as follows: Ex clove oil or guaiacol, five cwt., 14s. 6d. per lb.; one cwt., 14s. 7½d.; 56 lb., 14s. 9d.; less than 56 lb., 15s., carriage paid in the United Kingdom. Tins in cases are now returnable to makers.

Crude Drugs, etc.

WHILE the volume of business transacted in these markets during the week has not been large, values of most products are keeping fully steady. A number of products are in short supply.

ACONITE ROOT.—Spot supplies are scarce and would be worth about 140s. per cwt., if available.

AGAR.—Market is about unchanged, with a fair business passing. Spot, Kobe No. 1, about 8s. 3d. per lb.; Kobe No. 2, about 8s.; and Yokohama No. 1, about 7s. 10½d. per lb., ex store, duty paid. No shipment offers are available from origin.

ALOES.—Conditions in this market are reported to be firm. A fair demand continues for the CURAÇAO variety, at prices higher than those recorded last week. Spot, between 310s. and 350s. per cwt., ex store, according to quantity. The most recent c.i.f. price received from New York is 308s. per cwt., but little is offering at this figure. Business in Cape shows little change on the week, and quotations are at former levels; spot, about 57s. 6d. to 60s. per cwt. The value of Zanzibar leaves, if available, would be about 90s. per cwt., ex store.

In the six months ended June 30, 1940, exports of aloes from the Cape amounted to 42,453 lb., valued at £5,743, compared with 561,357 lb., valued at £8,047, during the corresponding period of the previous year.

ANTIMONY.—Values are steady at former rates. English, 99 per cent., £90 per ton, delivered; foreign regulus, £90 to £93 per ton, duty paid; Chinese regulus, £90 to £92 per ton, ex warehouse London.

BALSAMS.—Business has been quiet. *Tolu*, in limited supply, is quoted nominal at about 9s. 6d. per lb. *Canada* is at about 5s. 6d. per lb. *Copaiba*, Para, is valued at about 3s. 6d. to 3s. 9d. per lb. *Peru* is worth about 7s. 9d. per lb.

BENZONIN.—Demand for Sumatra continues about average, and values are maintained at between £5 10s. and £6 15s. per cwt., ex store.

BISMUTH METAL.—The quoted price of the metal continues unchanged at one dollar 25 cents per lb.

BUCHU.—The market is unchanged and quiet. Fair green rounds, quoted on pot at about 2s. 9d. to 3s. per lb., ex store, according to quantity and quality.

In the six months ended June 30, 1940, exports of buchu leaves from the Cape amounted to 160,489 lb., valued at £16,622, compared with 205,879 lb., valued at £8,889, during the corresponding period of the previous year.

CAMPHOR.—Business remains about average, quotations unchanged. Japanese, in fair demand: Spot, slabs, about 5s. 3d. per lb.; tablets, a few cases reported available at about 6s. per lb.; a limited supply of flowers is understood to be available in London. Continental synthetic powder, 5s. 3d.; tablets, 5s. 6d. per lb., ex store. English refined, quoted as follows:—Flowers, one wt., 5s. 9d.; 28 lb., 5s. 10d.; less than 28 lb., 5s. 11d. per lb. Transparent tablets, ¼-oz., one cwt., 6s. 3d.; 28 lb., 6s. 4d.; less than 28 lb., 6s. 5d. per lb.

CANTHARIDES.—Supplies on the spot are limited, market steady. Chinese, in spot, would be worth about 4s. 3d. to 4s. 6d. per lb., duty paid; shipment, in the region of 4s. 3d. per lb., c.i.f. The spot value of any Russian material would be about 6s. per lb.

CARDAMONS.—Some small inquiry, market steady and unchanged. Ceylon, spot, between 3s. 6d. and 5s. per lb., according to quantity. Bombay seed, about 4s. 6d. per lb. Mangalore seed, about 4s. 3d. Aleppy greens, about 3s. 2d.

CASCARA SAGRADA.—Business continues fair, market steady. Spot values are at about 87s. 6d. to 97s. 6d. per cwt., according to age of bark. The last shipment offer from source was at 65s. per cwt., c.i.f.

CASCARILLA.—Interest in this product has been moderate. Dealers are offering good silvery quill at about 1s. 6d. per lb., and siftings at about 1s. 4d. per lb.

CHAMOMILES.—This material is difficult to obtain, and any flowers of medium quality available would be worth at least 400s. per cwt., ex store.

CHILLIES.—The present spot value of Mombasa is 125s. per cwt.; Zanzibar, a.q., 115s.; Sierra Leone, 112s. 6d. per cwt.

CLOVES.—Business has been rather quiet this week, and the quoted price is unchanged. Spot, Zanzibar, 9½d. per lb., sellers; shipment, September–October, 1d. per lb., c.i.f., nominal. Madagascar, steady at 9½d. per lb., in bond.

COCOA BUTTER.—Prime English is quoted on spot at 1s. 1½d. per lb., ex wharf; foreign continues unchanged at 1s. 2d. per lb., duty paid, ex store.

COCONUT (DESICCATED).—Again firmer. Spot, fine, is now quoted at up to 43s. 6d. per cwt., and medium at 42s. per cwt.

COLOCYNTH.—Interest in this product has been poor. Spot is quoted at about 1s. 6d. to 1s. 9d. per lb., according to quality.

ERGOT.—Spanish-Portuguese, new-crop, for prompt shipment, is quoted at about 6s. 6d. per lb., c.i.f. Spot value is now at about 9s. per lb., ex store.

GAMBOGE.—A steady but small-sized business continues, with values firm. Good-quality Siam pipe is worth between £25 and £26 per cwt., duty paid.

GENTIAN.—Stocks of this product in first hands are limited. Any small odd lots available would be worth about 180s. per cwt.

GINGER.—Market has been quiet, but quoted values are fully maintained. West African, spot, 39s. per cwt., sellers. Jamaican, spot, small-medium, 55s.; bold, in barrels, 85s. per cwt., ex store. Cochín, unwashed, 48s. per cwt., ex store.

GUM ACACIA.—Kordofan cleaned sorts, now quoted slightly easier on spot at about 83s. per cwt.; bleached, from 125s. to 150s. per cwt., according to quality; shipment, new-crop, 45s. per cwt., c.i.f., nominal.

HENNA.—The spot price of leaves is maintained at about 85s. per cwt., ex store, for any available. Supplies in first hands are now extremely limited.

HONEY.—A rather better demand is reported on the London market, but prices are unchanged from those previously quoted. Jamaican, on spot, between 90s. and 105s. per cwt., nominal. Supplies of all descriptions are limited.

HYDRASTIS.—Dealers' prices for spot continue steady at about 22s. 6d. per lb. for good-test root, and at about 19s. to 19s. 6d. per lb. for untested.

IPCACUANHA.—A fair volume of business is being done at full prices. Matto Grosso continues to be quoted at about 25s. to 26s. per lb., ex store; quotations for September shipment are at about 21s. per lb., c.i.f. Minas is selling fairly well at unchanged prices; spot, between 11s. 6d. and 12s. 6d. per lb., ex store, according to test; shipment, September–October, about 7s. to 7s. 6d. per lb., c.i.f. EXT. IPCAC. LIQ., 30s. per lb. for minimum lots of twelve winchesters.

LAVENDER FLOWERS.—The spot value of any good blue flowers, if available, would be in the region of 2s. per lb.

LOBELIA HERB.—Spot supplies are at about 9½d. to 10d. per lb., ex store.

MENTHOL.—The spot market has been quiet during the week, and quotations are about unchanged. Japanese, spot, about 21s. to 22s. per lb., ex store. Chinese, about 16s. to 16s. 3d. per lb., ex store, according to brand; shipment, September–October, 14s. 3d. per lb., c.i.f.

MERCURY.—Market steady at previously quoted values. The London spot quotation is unchanged at £54 10s. per bottle of 34½ kilos, ex warehouse, without engagement and subject to confirmation. It is understood that a recent consignment from America has been disposed of, but further arrivals from this and other sources are expected.

NUTMEGS.—Prices well maintained, business about average. West Indian, spot, 80's, 1s.; 90's, 8d.; wormy and broken, 6½d. per lb.

ORANGE PEEL.—Dealers report that spot stocks of this product are now running low. The value of any thin-cut would be between 3s. and 3s. 6d. per lb., ex store. Bitter quarters are quoted at approximately 1s. 10d.

PEPPER.—The market is steady, with values about maintained on the week; business has been quiet. Lampong, spot, in bond, unchanged at 3½d. per lb.; shipment, September–October, 2½d., c.i.f., nominal. Tellicherry, spot, 4½d.; shipment, September–October, 34s. per cwt., c.i.f. Aleppy, spot, 4½d.; shipment, September–October, 34s. per cwt., c.i.f. White Muntok, spot, duty paid, slightly dearer at 5½d.; in bond, 5d.; shipment, September–October, 4½d. per lb., c.i.f., nominal.

PIMENTO.—The market is steady, business quiet. Spot, 11½d. per lb., sellers; shipment, new-crop, September–October, 85s. per cwt., c.i.f.

PYRETHRUM.—Spot quotations are around 185s. per cwt., ex store.

QUILLAIA BARK.—Business has been quiet, market steady. Dealers are quoting approximately 85s. per cwt., ex store, for spot material.

RHUBARB.—The market is steady, with good-quality rough-round selling fairly well at between 4s. 10½d. and 5s. 1½d. per lb., duty paid, according to quantity. Shensi, round and flat, is quoted at about 7s. 9d. per lb., and pickings at about 5s. 9d. per lb. A parcel of the usual varieties of Shensi is reported available at about 7s. 6d. per lb., duty paid.

RUBBER.—Quiet; values a fraction easier on the week. Standard ribbed smoked sheet, spot, 11½d.; September, 11½d.; October, 11½d.; November, 11½d.; December, 11½d.; January–March, 11½d.; April–June, 11½d.

SENEGA.—The price of spot continues at about 3s. 6d. per lb., but there appears to be little available. Shipment, September, about 3s. 6d. per lb., c.i.f.

SENNA.—Conditions continue steady, but business is rather slow. Best pale hand-picked Tinnevely pods are valued at 10½d. per lb., with darker grades at between 6½d. and 7½d.; f.a.q., 5½d. per lb.; leaves, No. 1, about 8½d.; No. 2, 5½d.; and No. 3, 4½d. per lb. Hand-picked Alexandrian continue nominal and in short supply.

The area under the senna crop in the districts of Ramnad and Tinnevely in 1939–40 is reported to be below normal owing to want of rain in December 1939. The condition of the rain-fed crop was poor, and the yield was below normal. The growth of the wet crop is satisfactory and the yield is expected to be normal.

SHELLAC.—Standard TN orange nominal on spot at 80s. per cwt.; pure button, 110s.; fine orange, 105s. to 170s. per cwt.

TAMARINDS.—West Indian, quoted at about 38s. per cwt., ex store.

TRAGACANTH.—Values for all grades of gum unchanged, market quiet. Finest selected white ribbon, £90; No. 1, white, £85; No. 2, white, £65; No. 3, white, £50; pale leaf, £30; amber leaf, £22; red leaf, from £10 10s.; woody and hoggy, from £5 are per cwt., ex store.

WAXES.—BEES'.—Quoted dearer. Spot, from 170s.; in bond, 160s.; shipment, Dar-es-Salaam, 155s. per cwt., c.i.f.; Japanese, first three brands, spot, duty paid, 120s.; in bond, 110s.; shipment, 110s., c.i.f. CARNAUBA.—Fatty grey, 337s. 6d.; chalky grey, spot, 330s.; Primeira, spot, 450s.

Essential and Expressed Oils, etc.

GENERAL trading conditions in these markets have been quiet during the past month, and most of the demand has been for articles which are difficult to obtain. It is probable, however, that business in oils for winter use will soon show some activity. Reasonably good stocks of such products as eucalyptus, citronella, orange, clove, etc., are available.

ALMOND.—Limited business; market steady. Expressed, about 3s. 8d. to 3s. 11d. per lb., in cwt. lots; smaller quantities, up to about 4s. 3d. per lb., ex store. Genuine French bitter is quoted at about 15s. per lb., nominal, ex store.

ANISE (STAR).—Market firm. Spot, tins in cases, about 4s. 9d.; drums, about 4s. 6d. to 4s. 7d. per lb., ex store. No shipment offers are reported from origin.

AVOCADO PEAR.—Not much business, but market continues steady. Spot, quoted in the region of 55s. to 57s. per gall., delivered, with smaller quantities at higher prices.

BAY.—Market continues steady, values about unchanged. Spot, approximately 5s. 6d. to 6s. per lb., ex store, according to quality.

BERGAMOT.—Spot values continue nominal, and prices would have to be negotiated between buyer and seller. British makers are offering artificial products at attractive prices.

BOIS DE ROSE.—Very firm, with supplies limited. Spot, between 10s. 6d. and 11s. per lb. Shipment, in the region of 9s. 3d. per lb., c.i.f., in drums.

CASSIA.—Spot business is limited, price firm. Spot, if available, would be worth about 6s. 6d. to 6s. 9d. per lb. No shipment offers.

CITRONELLA.—A steady demand continues. Ceylon, spot, 2s. 4d. to 2s. 6d. per lb., in drums; small quantities, up to 3s. per lb.; shipment, about 1s. 6½d. per lb. Java, spot, from 2s. 6d. to 3s. per lb.; shipment, about 1s. 9d. per lb., c.i.f.

CLOVE.—Madagascar is reported firmer at about 5s. 9d. upwards per lb., in drums, if available. English, quoted unchanged at from 6s. 9d. to 7s. 3d. per lb., as to quantity.

EUCALYPTUS.—Little business has been done, but values are maintained. 70 to 75 per cent. oil continues to be quoted at about 4s. to 4s. 6d. per lb., according to holder; shipment prices are nominal at about 3s. per lb., c.i.f. Fair supplies are due to come forward.

GERANIUM.—Spot supplies of Bourbon and Algerian oils are now quoted at about 37s. 6d. to 42s. per lb., for any good quality oil available. There are no shipment offers.

GRAPEFRUIT.—Genuine Californian, quoted at approximately 12s. 6d. per lb. Genuine Florida is worth about 11s. 6d. per lb.

LEMON.—No quotations are available for this oil, and values of hand-pressed would have to be negotiated. Californian distilled is quoted at about 10s. per lb., nominal. There are no shipment prices available for cold-pressed. British makers are offering artificial substitutes at attractive prices.

LEMONGRASS.—Demand for this oil is quiet, price unchanged. Spot oil would be worth about 4s. to 4s. 6d. per lb.; shipment, up to about 3s. per lb., c.i.f.

LIME.—The spot value of genuine West Indian continues at about 30s. per lb., with other qualities at lower prices.

NEROLI.—The spot value of pure French oil would be about 80s. per oz. Artificial substitutes are offered by British makers at attractive prices.

OLIVE.—The Ministry of Food controlled price paid by importers for large bulk quantities in 50-gall. drums is unchanged. Distributors' prices for a few gallons, packed in gallon tins, carriage paid, now range from 12s. 6d. to 13s. 6d. per gall., according to quantity.

ORANGE.—The spot demand for French Guinea oil remains steady, with quotations about unchanged. French Guinea oil, about 6s. 6d. per lb., according to quantity. Rhodesian oil is quoted at about 10s. per lb. for available stocks. Californian is quoted in sterling at 4s. 10d. per lb., in small drums, ex store, duty paid, limited supplies only being available. Shipment can be effected by transit overland to New York at an extra charge of five cents per lb.

OTTO OF ROSE.—Bulgarian is quoted on spot at between 60s. and 70s. per oz.

PALMAROSA.—Business has been on a modest scale, but prices are firm. Spot, approximately 12s. 6d. per lb., ex store; shipment is now up to about 11s. per lb., c.i.f.

PEPPERMINT.—The Japanese product has met with a fair demand this week, and the market continues fully steady. Small supplies on spot are quoted at about 9s. 6d. per lb. Demand for Chinese has been fairly good, and spot oil is quoted at between 7s. and 7s. 3d. per lb., according to seller. Some business is reported done forward at 6s. 3d. per lb., c.i.f. American natural oil, steady at 14s. 3d., in drums, and 14s. 7d., in tins in cases, c.i.f. Spot, steady at about 16s. per lb., ex store.

PETITGRAIN.—Firm. Spot values are at about 11s. 6d. to 12s. 6d. per lb., nominal. There appear to be no shipment offers for this product.

ROSEMARY.—Spanish oil on spot would be worth about 5s. 6d. per lb.; shipment is now in the region of 4s. 9d. to 5s. per lb., c.i.f.

SANDALWOOD.—Genuine East Indian Mysore, in one-case lots, 19s. per lb. East Indian, produced outside the province of Mysore, 18s. per lb. for bulk quantities. English-made West Indian, 15s. per lb.; Australian, one-case lots, 16s., and five-cwt. lots, 15s. 6d. per lb.

SPIKE.—Spot holders of genuine Spanish oil are quoting prices of about 11s. to 12s. per lb., ex store; shipment is unchanged at approximately 10s. 6d. per lb., c.i.f.

VETIVERT.—Spot supplies of Bourbon are now quoted at in the region of 45s. per lb., and Java at about 40s. per lb., ex store.

WORMSEED.—Market steady; quotations unchanged. Spot is worth approximately 24s. 6d. per lb.; shipment, in the region of 23s. per lb., c.i.f.

CORRESPONDENCE

Correspondents may adopt an assumed name, but must in all cases furnish their real name and address to the Editor

Unusual Poisonings

SIR,—The fatal case of poisoning by means of potassium ferricyanide referred to in the *C. & D.*, September 14, p. 139, serves to remind us that many of the substances sold and dispensed in pharmacies are potentially toxic though not scheduled as poisons. For an instance we need look no further than the well-known case of deaths from amylene hydrate in 1914. A statement in the "British Medical Journal" that this hypnotic is practically free from danger was quoted without comment in the editions of the "Extra Pharmacopœia" and Squire's "Pocket Companion" published in 1915, and only Squire printed the "practically." Both books went to press, no doubt, before the event occurred. According to such reports of the Registrar-General for England and Wales as I have noted, oil of juniper has been responsible within recent years for two deaths, spirit of nitrous ether for two, oil of cloves for one, ipecacuanha for three, oil of anise for one, oil of eucalyptus for six, and hydrogen peroxide for one. Additions to this list of apparently harmless substances could easily be made. The ages of the persons poisoned are not given, and it may be supposed that some of them were infants or young children. Even so, the need for circumspection when conducting any sale, however ordinary, across the counter is brought home to us by the record of these occasional fatalities. It would be possible to compile a list of substances—quinine, paraldehyde and others—that may be said to occupy a border-line position between the actively toxic and the innocuous; and I am inclined to think that there are proportionately fewer innocuous drugs and chemicals in the average pharmacy now than there were a generation ago.—Yours faithfully,

RECORDER (18/9).

Retailers' Difficulties

SIR,—It is appreciated that the wholesaler will have considerable difficulty and much extra work in order to comply with the conditions of the Limitation of Supplies Order and the Purchase Tax, but that does not, unfortunately, mean that all the troubles will have been settled before the goods reach the retailer. The first thing one would like to know is how the wholesalers will allot the two-thirds of the value of the goods allowed. It is stated (*C. & D. Coloured Supplement*, September 21, p. xiv, par. 3) that they will confine quantity orders to customers who have been in the habit of buying the same lines in quantities from them in the past, so presumably retailers who have bought direct from the manufacturers will not be affected by this condition. Will the wholesaler look back through his account to ascertain the total value of each line supplied to the small man who has been unable to buy in quantity, and who orders in dozens or half-dozens? Or will the quantity buyer get the first call and others be dealt with if any of the wholesaler's quota remains? Another point is that sales in a chemist's business are not constant and cannot be fixed in advance, therefore a restriction to two-thirds the value may mean either a surplus or a shortage of particular goods. Ultimately it is the consumer who will suffer the two-thirds restriction in consumption, how then is the retailer to make a fair distribution? Whenever there is a scarcity of a particular item the shortage is brought home to chemists by the extra number of inquiries for it over the counter, as people go from one shop to another looking for stocks. This means that where a shop holds a stock and other retailers have none, there is a fictitious increase in the demand for that article. How is this to be avoided? One cannot ask each customer if he has bought a supply elsewhere, and one cannot refuse to serve customers on the ground that they do not buy the goods regularly, especially in businesses where there is a large passing trade. When a customer is a regular purchaser of an article, it will be possible for him to order it to be reserved, otherwise the limitation of supplies will result in some persons being unable to obtain their usual requirements. And it may be taken that in future the retailer will be unable to accept special orders for units with any guarantee of supply, although in the case of a chemist's customer the item may be required for medicinal purposes. With regard to the Purchase Tax and the extension of credit, here again it may be recognised that wholesalers require prompt payment, the difficulty in this case devolving solely on the retailer, who has to collect his money in turn. For those whose businesses consist of cash trade, the principle of monthly payments is easy to follow, but with a credit trade it is not so easy to do this. Where there is a large credit trade the bills are sent out month after month marked "a/c rendered," yet all the while stocks have to be replaced, meaning fresh outlay of capital if debts do not come in. The difficulty is that in the chemist's business the individual accounts are not large, and it is not profitable to take action for the recovery of small amounts, but as the wholesaler's statements have to be settled promptly, some limit of time should be introduced beyond which the retail customer cannot claim credit. Moreover, it may be that delay in rendering invoices will be inevitable, but this means that the retailer does not know when he receives them what the goods cost and so cannot fix his selling price.—Yours faithfully, PRICER (21/9).

A SELECTION OF FAMILIAR PREPARATIONS

'ADALIN'

'Adalin' is the ideal sedative for sensitive patients who suffer unduly from war-time strain. It is well-tolerated, non-cumulative and can be taken by day as well as by night. Quite small doses suffice to restore calmness of mind. 'Adalin' is not subject to the Poison Regulations.

'CAMPOFERRON'

In moderate cases of pernicious anæmia on "maintenance treatment," this oral liver preparation makes it possible to increase the intervals between injections of 'Campolon'. 'Campoferron' contains 'Campolon' plus iron and copper. It is also of value in secondary anæmia.

'PHANODORM'

'Phanodorm,' a medium hypnotic, ensures the prompt onset of sleep of approximately seven hours duration. Rapid excretion is its characteristic feature. It is of particular value for the nervous over-tired worker who, every morning, in spite of insomnia, must feel equal to his job.



'BETAXAN'

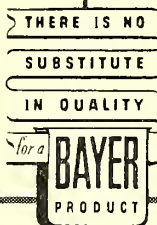
'Betaxan', which may be given orally or by injection, is a standardised synthetic Vitamin B₁ preparation. Indications include neuritis, neuralgia, sciatica and anorexia.

'DEVEGAN'

The distressing symptoms of leucorrhœa, particularly that due to *trichomonas vaginalis*, are promptly relieved by local treatment with 'Devegan'. Cures have been achieved in a large proportion of cases. Administration is clean, easy and safe.

'PRONTOSIL'

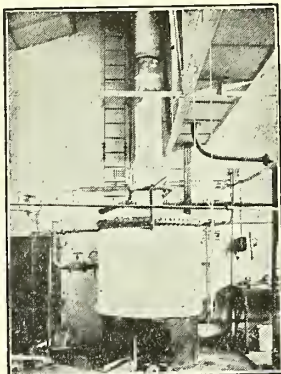
For local chemotherapy in chronic resistant lesions, infected wounds and burns, 'Prontosil' is now available in ointment form and as a solution. These preparations have a stimulating, deodorant and anti-bacterial action, and produce rapid improvement without risk of toxic effects.



Doctors will order these, and other Bayer preparations, by the trade marks distinguishing the original preparations. They know that consistent clinical results cannot be guaranteed where products stated to have "the same essential composition" or "similar therapeutic properties" are concerned.

BAYER PRODUCTS LIMITED

AFRICA HOUSE · KINGSWAY · LONDON · W.C.2



BURNSIDE'S EUCALYPTUS OILS

Distilled in Australia by the largest distillers and refiners of Eucalyptus Oils in the world—W. K. BURNSIDE, PTY., LTD., MELBOURNE, AUSTRALIA.

80/85% B.P.
Oil Euc. Dives 40/45%
Oil Euc. Citriodora

70/75% B.P.
Piperitone 90/95%
Oil Euc. Phellandra

... Phellandrene ...

UNIFORMITY OF QUALITY • CONSISTENCY OF ODOUR

Agents for U.K.: **WILSON & MANSFIELD LTD.**
15 Philpot Lane, London, E.C.3
(WHOLESALE ONLY)

'Phone : MANSION HOUSE 9264-5-6
'Grams : WYFIELD, LONDON

We Ship

EPHEDRA VULGARIS, BELLADONNA, HYOSCYAMUS, ACONITE, RHUBARB, VALERIAN, GLYCYRRHIZÆ, DANDELION, COLCHICUM CORMS, SQUILLS, JUNIPER BERRIES, ASAFÆTIDA, RED PEPPER FRUIT, ETC., of guaranteed standard quality

ENQUIRIES INVITED

MEHTA BROTHERS
LAWRENCE ROAD
AMRITSAR, INDIA



Wholesale Prices

1/3 Size
11/6 per dozen net
3/- Size
27/6 per dozen net

Carriage Paid Gross Quantities or equivalent

Manufactured only by
J. F. WHITE & CO., LTD., Chemists
BENSON STREET, LEEDS 7

HOWARD LLOYD & Co., Ltd.

Manufacturing Chemists

LEICESTER (Est. 1884)

'PHONE : LEICESTER 5423



Consult us for your
WAR TIME
REQUIREMENTS

PILLS • TABLETS • CAPSULES

SPECIALISTS

in the manufacture
of these goods over
a period of 50 years

Chemicals
PHARMACEUTICAL
AND TECHNICAL

ACIDS
CITRATES
MERCURIALS
SCALE PREPARATIONS
BISMUTH SALTS
HYPOPHOSPHITES
STEARATES
ETC.

THOS. TYRER

AND COMPANY, LIMITED
STRATFORD, LONDON, E.15

Phone: MARYland 4874 (5 lines)

Telegrams: "Tyremicus Phone London"

SPECIALISTS

for over 40 years
in the Manufacture of:—

**TABLETS
& PILLS**

LOZENGES, SUPPOSITORIES
GENERAL PHARMACEUTICAL
PREPARATIONS

- Packed under your own Brand if desired
- EXPORT ENQUIRIES INVITED

MATTHEWS & WILSON

LIMITED

ESTABLISHED 1894

6 and 8 Cole Street, London, S.E.1

'Phone: HOP 2147-8

'Grams: Pilleolum, Sediast, London

GUMS

Acacia

Tragacanth

Karaya

Benzoin

Copal

Mastic

Damar

SHELLACS

and

WAXES

Japan Wax, White
Bees Wax, Candelilla
Wax, Carnauba Wax

Official Agents:

**ANGELO BROS. LTD
SHELLACS**

In natural
and powder
form

A.F. SUTER & CO. LTD

133 FENCHURCH ST., LONDON, E.C.3

Phones, Mansion House 0347 (2 lines). Grams, Suterresin, Fen, London

**"REPEAT" SALES
are certain with***Johnsons*
**TANKS and
CHEMICALS**

Thousands of photographers own a Johnsons Adjustable Tank. Most of them will now want to buy the specially designed Time and Temperature



Calculator just introduced for this Tank, which ensures precision developing. On it are given development times for all popular films and for the four most popular developers, at 65° and 70°. The Calculator also carries useful conversion tables and other data. Engraved on strong ivorine discs which fit the lid of the Tank. Time and Temperature Calculator Discs, per pair 2/6
Johnsons Adjustable Tank 17/6

JOHNSONS 35-mm. TANK takes full 36-exp. 35-mm. film. Holds 16 oz. of solution. Complete with Time and Temperature Calculator 22/6

JOHNSONS MERITOL is the vital ingredient in fine grain developers. Discovered by Johnsons. Ensures perfectly fine grain. Meritol-Metol and M.C.M. 100 are two highly successful developers incorporating Meritol.



JOHNSONS TABLETS are Photographic Chemicals in the most compact form. Packed in air-tight glass tubes.

AMIDOL. M-Q. VEDOL. PYRO-METOL. PYRO-SODA Developers. Per 1/6 Carton.

BLUE, GREEN, RED, SEPIA Tonings. Per 2/- Carton.

REDUCERS and INTENSIFIERS. Per 1/- Carton.



JOHNSONS DEVELOPER PACKETS are convenient and economical. Cost but a few pence each. Those available include: AMIDOL, GASLIGHT, M-Q., CHLORQUINOL, HYDROQUINONE, PYRO-METOL, PYRO-SODA.

Ask Johnsons to send you full details of all the above products. They all mean "repeat" business

JOHNSON & SONS Manufacturing Chemists Ltd., HENDON, N.W.4

Dr. J. Collis Browne's Chlorodyne
and
The Pharmacy and Poisons Act, 1933

Dr. J. Collis Browne's
CHLORODYNE

SALE RESTRICTED TO REGISTERED CHEMISTS

PURCHASER'S SIGNATURE NOT REQUIRED

Sole Proprietors:
J. T. DAVENPORT LTD.



Union St.,
London, S.E.1

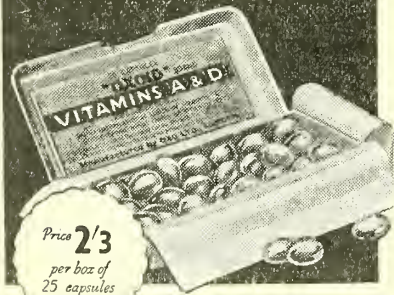
PRODUCT OF THE OXO LABORATORIES

★ **"OXOID" BRAND** ★
VITAMINS 'A' & 'D'

Each Capsule contains 7,000 I.U. of 'A' and 900 I.U. of 'D.'

FOR RAPID ADAPTATION OF VISION IN
SEMI - DARKNESS. (Lancet, 1939, II. 1355.)

**TO COMBAT THE
BLACK-OUT..**



Price **2/3**
per box of
25 capsules

Sold by Chemists

OXO LIMITED, Thames House, London, E.C.4

PRODUCT OF THE OXO LABORATORIES

Simpkin's ANNOUNCE
VIGOUROUS NEW AD.
CAMPAIGN IN LEADING
EVENING PAPERS



Here's big news for chemists. Simpkins launch a vigorous advertising campaign in the leading evening papers throughout the country. Big and consistent sales of Simpkins Medicated Glucose Lozenges will be the result. Feature these Lozenges on your counters and in your windows and get your share of the business and the profits.

A. L. SIMPKIN & CO. LTD.
Manufacturing Chemists
SHEFFIELD, 6

**THESE ADS. WILL BRING
BIG BUSINESS TO THE
CHEMIST WHO SELLS
Simpkin's
MEDICATED LOZENGES**



**5" SPACE
SIZES
BOOKED TO
APPEAR FOR
MANY WEEKS**

ORDER NOW AND PROFIT

THREE WORDS TO THE CHEMIST.....

DO IT NOW!!

IF YOU WANT TO ENSURE YOUR SUPPLIES OF

**MALT EXTRACT
& MALT AND OIL****REGISTRATION.**

Owing to prevailing conditions it is most essential that registration for malt and oil should be made immediately if you are to be sure of your supplies this winter. Please write at once for samples, prices, range of labels, etc., and make sure of YOUR full share if Malt and Oil is rationed.

SPECIAL BULK ORDERS.

We are particularly well placed to quote for supplies to Hospitals, Clinics, Corporations and other bulk buyers. We make to any special formula or individual requirements either for home or abroad.

*Make sure of a complaint-free winter by selling****"The Malt that Cannot Crystallise"*****JEFFREYS, MILLER & CO., LTD.**

LEYLAND MILLS, WIGAN. LONDON DEPOT, 19-25 Brookside Road, Upper Holloway, N.19

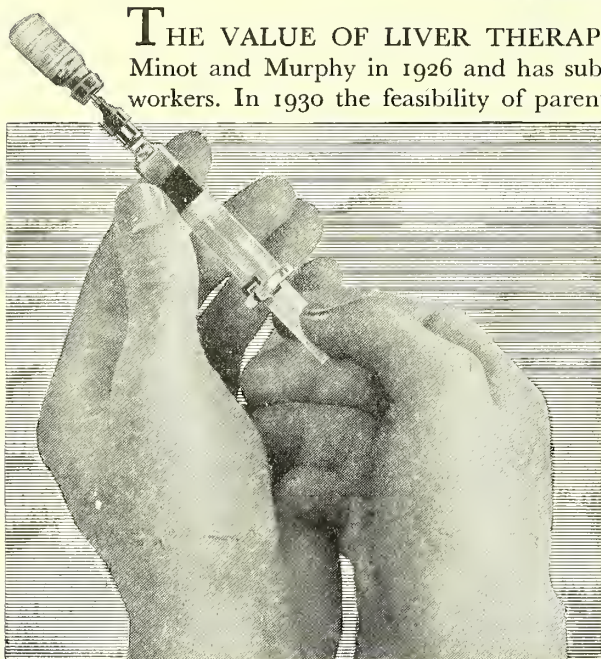
TELEGRAMS: MALTUM WIGAN TELEPHONE: WIGAN 2327

Phone: ARCHway 3627

The treatment of pernicious anaemia with 1cc. concentrated

SOLUTION LIVER EXTRACT (PARENTERAL)

Lederle



THE VALUE OF LIVER THERAPY in pernicious anaemia was demonstrated by Minot and Murphy in 1926 and has subsequently been confirmed by many independent workers. In 1930 the feasibility of parenteral administration of liver extract was demonstrated. This therapy proved not only far more effective than oral therapy but was readily seen to possess additional advantages. Considerable effort has been expended in trying to find a specific anti-anaemic factor, but recent work by Jacobson and Subarrow (1937) seems to show that for the treatment of pernicious anaemia, and especially those cases with neurological complications, the use of a whole liver extract gives the most satisfactory results.

1 cc. Concentrated Liver Extract Lederle satisfies these requirements, viz:—

- that the solution can be parenterally administered.
- that it is a concentrated whole liver extract.

A PRODUCT OF THE LEDERLE LABORATORIES INC., NEW YORK, U.S.A., DISTRIBUTED IN ENGLAND BY CHAS. F. THACKRAY, LTD., THE OLD MEDICAL SCHOOL, LEEDS AND 252 REGENT STREET, LONDON, W.1

DR. VARKOFF (Liver Extract) TABLETS

are now being marketed through the trade in 4/-, 7/6 and 14/- sizes

They are soundly advertised and shew good profits. Specially attractive terms and literature on request to

VARKOFF PROPRIETARIES (1940) LTD.
CAERNARVON, NORTH WALES

HARVEY'S Horse Remedies

P. A. T. A. Protected Prices

Supplies through all Wholesale Houses

HARVEY & CO. (DUBLIN), LTD., DUBLIN



MASON'S EXTRACT OF HERBS

**Herb Beer
for NATIONAL
FITNESS**

Mason's Extract of Herbs is used by thousands for the home-brewing of 'Mason's Sparkling Herb Beer'—a delicious, thirst-quenching, invigorating drink. 9d. bottle makes 6 gallons, 7s. 3d. doz. (subj.). Mason's Dried Yeast, ideal for brewing and baking. 9d. size, 7s. 3d. doz. (subj.).

Write for Particulars
NEWBALL & MASON, LTD., NOTTINGHAM

HOMOEOPATHIC MEDICINES

SHOWCASE AVAILABLE Terms on application

Leath & Ross Laboratory

342 Kilburn High Road, London, N.W.6.

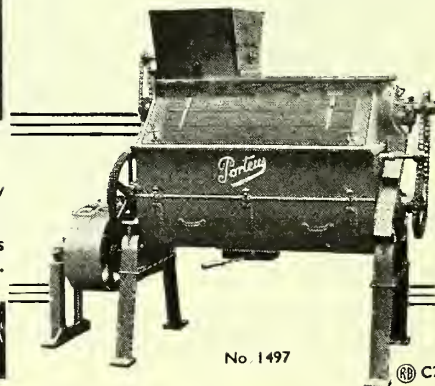
THE SATISFACTORY WAY—THE *Porteus* WAY

"ATLAS" SIFTER & MIXER

Here is a robust machine of high quality, designed by engineers who know their job from A to Z.

You will get satisfaction and a lifetime's service if you rely on Porteus equipment. Ask for our catalogue and seek our help on mixing problems.

GEORGE PORTEUS & SONS (LEEDS) LIMITED
LEEDS BRIDGE WORKS *Provender Milling Specialists* LEEDS 10



No 1497

® C2

On Active Service . . .



SEVENSEAS COD LIVER OIL

The deep-sea fishing fleets have now been absorbed by the Royal Navy to such an extent that cod liver oil production has practically ceased.

Pure medicinal cod liver oil is already scarce and most of the bulk oil has been distributed equitably to the trade. It is difficult or even impossible to get future supplies.

The pharmaceutical profession will be glad, therefore, to hear that we have taken

steps to reserve bottled supplies of biologically tested "SevenSeaS" Cod Liver Oil of pre-war quality and purity and, unless some unforeseen development takes place, sufficient quantities will be available at current prices for this winter season. Showcards are available and will be sent to you upon request but we would ask you to preserve them for future use as the production of further supplies is now prohibited.

We recommend you to place your order for your full season's requirements now. By doing so you will ease war-time problems of packaging, labour and transport and make sure of your supplies

BRITISH COD LIVER OIL PRODUCERS (HULL), LTD., ST. ANDREW'S DOCK, HULL



ZEAL

Clinicals

The Choice of Experts

BRITISH
MADE

NO HIGHER
IN PRICE THAN
NONDESCRIPT
MAKES

Also Household, Bath
and Works Thermometers,
the best of their kind

G. H. ZEAL LTD.
LOMBARD RD., MORDEN RD.,
LONDON, S.W.19
Phone: Liberty 2283-4-5

ARTHUR BERTON LTD.

"BRITANNIA HOUSE"

256/260 Old Street, London, E.C.1


have been, for over

90 years,

specialists in the

manufacture of

**SURGICAL
DRESSINGS**



IN YOUR OWN INTERESTS AND THOSE OF THE NATION GENERALLY YOU SHOULD BE STOCKING—


PLASTRIP

*First-Aid
ANTISEPTIC
SELF-ADHESIVE
BANDAGE*

PLASTRIP BONUS. Chemists only
Shows 16/- profit on 24/- outlay
8 x 1" (3d.) and 4 x 2" (6d.)
Selling at 4/-. Supplied on display cards or counter display boxes

Manufactured by
DUKE PHARMACEUTICAL Co. Ltd. LIVERPOOL

TRADE DISTRIBUTORS: UCAL Ltd. Cheltenham



FORSTERS & VAPOURISERS
FENOLIN for
FLUID Whooping Cough

Hall, Forster & Co., Ltd.
Newcastle-on-Tyne.

ON R.F.T.A.
44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

LABELS FOR EVERY PURPOSE!

We can give immediate attention
to all your label enquiries

ALF. HARRISON & SONS, LTD.
Medical and Advertising Printers, BURLEY RD., LEEDS, 4



WHOLESALE & EXPORT ONLY

HYPODERMIC NEEDLES
OF ALL DESCRIPTIONS

**S. & R. J.
EVERETT
& CO., LTD.**

Original makers of
STAINLESS STEEL NEEDLES
OUR SPECIALITIES INCLUDE THE
ORIGINAL RECORD FITTING AND N.H.I.
SPECIFICATION HYPODERMIC NEEDLES.
Also the Famous 'SUMMIT' hypodermic
needles now ALL BRITISH MADE.
Comprehensive catalogue sent on request.
Telephone: Thornton Heath 3252-3.

939, LONDON ROAD,
THORNTON HEATH, LONDON, S.W.16

*This display
on your counter*

**MEANS PROFIT
FOR YOU...
SATISFACTION FOR
YOUR CUSTOMER**



'SUCRETS' Lozenges promptly soothe irritated throats. They are antiseptic. Each batch is tested for germicidal activity. Displayed prominently on the counter, they are a "pick-up item" for every customer with throat irritation.



Dissolved slowly on the tongue, 'Sucrets' Lozenges

produce a marked soothing effect on the mucous membrane of the mouth and throat . . . promptly allay that "scratchy" feeling.

'Sucrets' Lozenges are convenient to carry. They are packed 24 in a neat metal box, each Lozenge individually wrapped. They may be carried loose in the handbag or pocket, or kept at the bedside.

SEND FOR BONUS TERMS

Pharmaceuticals

SHARP & DOHME LTD.

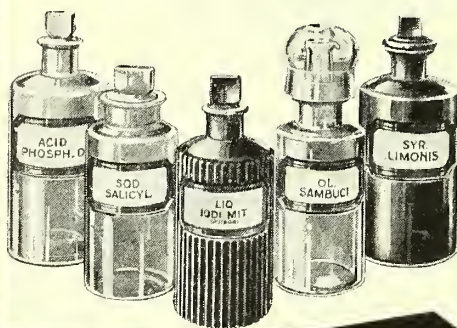
Biologicals

76-78 CITY ROAD, LONDON, E.C.1

*Set the "Tone"
of your Pharmacy
with*

RECESS LABELLED BOTTLES

Dispensary shelves with uniform rows of handsome recess labelled bottles create a good impression on all who see them—a miscellaneous collection of "sorts and sizes" of just ordinary bottles can only detract from professional standing and appearance. The public is discerning in these matters.



Beatson, Clark & Co. Ltd.
Chemical & Medical Glass Manufacturers
Rotherham, Yorkshire
ESTABLISHED 1751

® BC.29

"VISKAPS" and "VISKRINGS"

These quality closures give an attractive finish to any pack and ensure hygiene and security. Can be supplied wet or dry, in transparent or opaque quality, in almost any shade. They are the original self-shrinking Viscose seals.

"Viskrings" provide an alternative to the full cap when it is desired to leave the top of the container uncovered.

If you will send us one of your containers we will gladly seal it and return for your inspection free of charge.

VISCOSE DEVELOPMENT CO. LTD.

BROMLEY, KENT

Telephone: RAVENSBORNE 2641

Armstrong's

TAPER CORKS



For uniform quality, resilience, and dependability. In all standard sizes.

ARMSTRONG CORK CO. LTD.
KINGSBURY, LONDON, N.W.9

LIVERPOOL SCHOOL OF PHARMACY

Principal: H. HUMPHREYS-JONES, J.P., F.I.C., F.C.S., Ph.C.

Preparation for the
**PHARMACEUTICAL SOCIETY'S
EXAMINATIONS**

Nine Month's Courses for the
**PRELIMINARY, SCIENTIFIC, AND
C. & D. QUALIFYING EXAMS.**

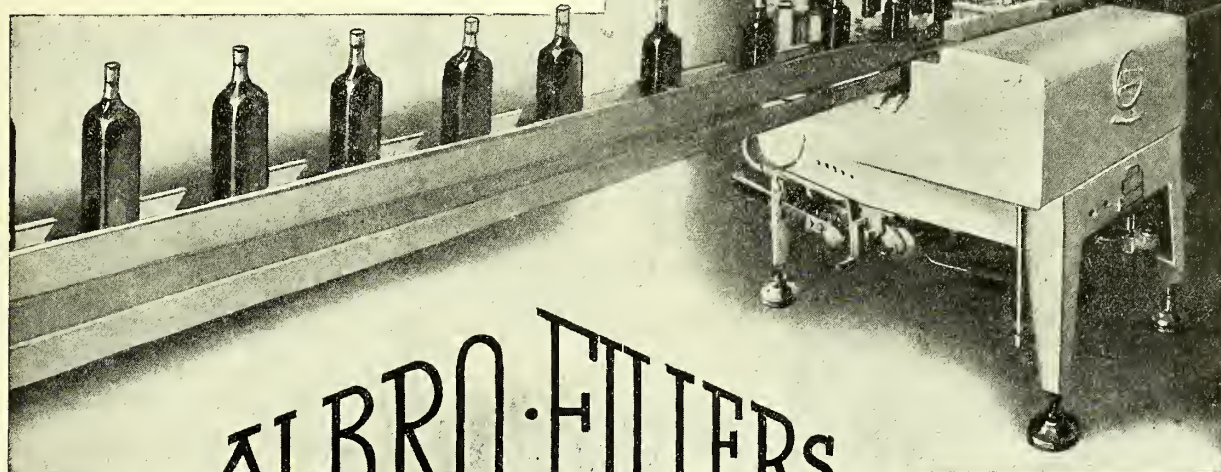
and

Special Separate Revision Courses for
the December Examinations—both parts
OCTOBER 3

Full particulars from

2 BLACKBURNE PLACE, 8

*Combine speed with perfect accuracy
and cleanliness and defy competition*



ALBRO-FILLERS

AND ENGINEERING CO. LTD.

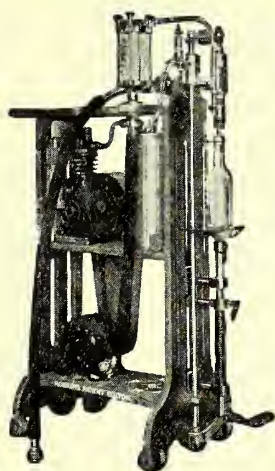
34

One of our many fully
automatic models with
a wide application.

Northampton Works, Watson's Road, Wood Green, London, N.22

Telephone Numbers: Bowes Park 2217, 2218

**ROBERTS' PATENT
"LEO" VACUUM FILLER**



for Glass, Stone,
and Tin Bottles.
Fills all sizes from
drachm to quart—
long, short or
sprinkler neck.

**Clean and Rapid
No Over Filling
Broken Bottles
Rejected
Easy to Clean
Self Rinsing**

WRITE FOR
PARTICULARS

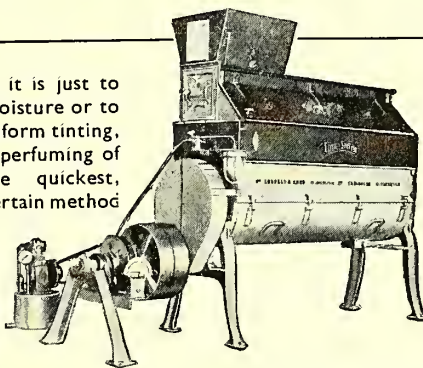
Roberts' Patent Filling Machine

Company Limited
BOLTON, LANCASHIRE

Makers of every description of Bottle Filling and Shallow
Jar and Tin Filling Machine for the Chemists' use
ALL RIGHTS RESERVED

**THREE PROCESSES
IN ONE
OPERATION**

Whether it is just to
replace lost moisture or to
secure the uniform tinting,
flavouring or perfuming of
powders, the quickest,
safest, most certain method
of adding
liquids etc.,
to dry pow-
ders is by
means of this
Gardner ma-
chine.



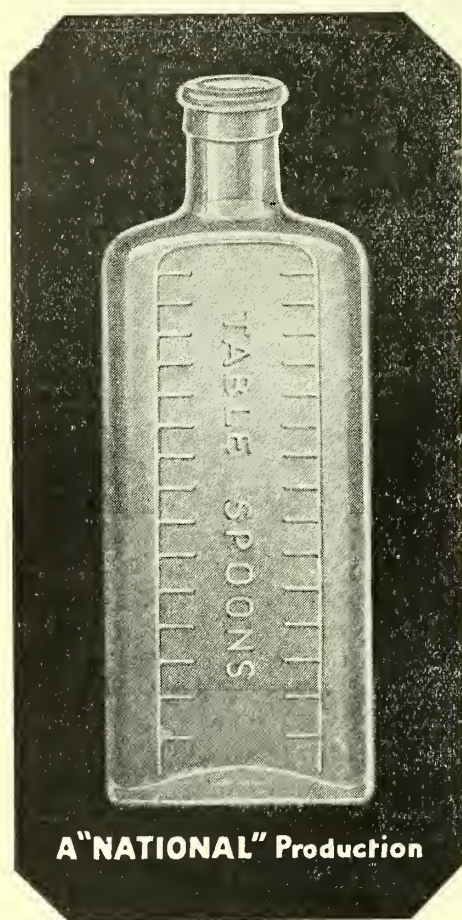
With it, a very wide variety of goods can be processed,
for it combines **THREE PROCESSES IN ONE MACHINE**

**The GARDNER Patent "Rapid"
SIFTER & MIXER with SPRAYER**

WM. GARDNER & SONS (GLOUCESTER) LTD
Bristol Road, Gloucester

Telephone: 2288 (3 lines) Telegrams: 'Gardner, Gloucester'

LONDON: 19 Gray's Inn Chambers, 20 High Holborn W.C.1
Telephone: Chancery 7347



"National" Dispensing Bottles

are Strong, Serviceable and Sure-sealing!

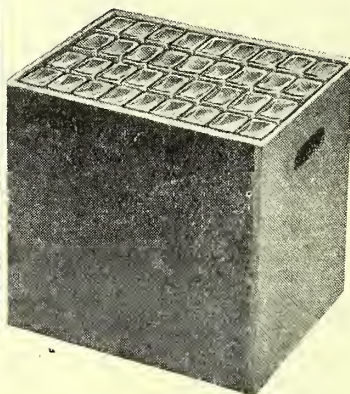
NEATLY PACKED IN 6 DOZEN
NON-RETURNABLE CARTONS

- ★ CONVENIENT IN SIZE
- ★ EASY TO HANDLE
- ★ UNIFORM IN QUANTITY

ALSO... Cork mouth Bottles
WASHED & PAPERED
Screw mouth Bottles
WASHED & CAPPED

SCREW CAPS SUPPLIED in

WHITE-ENAMELLED TIN PLATE
WHITE-ENAMELLED ALUMINIUM
BLACK BAKELITE MOULDED



Vials

HAVE YOU GOOD STOCKS OF
"NATIONAL" VIALS?

Ranging in size $\frac{1}{2}$ oz. up to 3 oz.
Plain or teaspoon graduations
Medium & tall types

MANUFACTURED IN BEST QUALITY
WHITE FLINT, AND PACKED IN FREE
NON-RETURNABLE CARTONS



May we advise Name and Address of nearest "NATIONAL" distributor?

NATIONAL GLASS WORKS (YORK) LTD.

'Phone: HOLborn 2146

First Avenue House, High Holborn, London, W.C.1
(WHOLESALE ONLY)

WORKS:
FISHERGATE, YORK

The CHEMIST AND DRUGGIST

SUPPLEMENT

This Supplement is inserted in every copy of The Chemist & Druggist

SEPT. 28
1940

28 ESSEX STREET, LONDON, W.C. 2

LONDON COLLEGE OF PHARMACY

Founder: H. WOOTTON, B.Sc. C. W. GOSLING, Ph.C.
Principal: IRVINE G. RANKIN, B.Sc., Ph.C.

SPECIALISTS IN TRAINING PHARMACISTS

NEXT SESSION will commence on Oct. 2nd for
9 Months Prelim. Scientific
9 Months Chemist and Druggist
3 Months Separate Revision (PS and C & D)

Benches now being reserved.

361 CLAPHAM ROAD, S.W.9 Telephone:
BRIXTON 2161

OPTICAL TUITION

FOR THE

S.M.C., B.O.A., and N.A.O. DIPLOMA Examinations
Particulars:—

C.A. SCURR, F.S.M.O., F.B.O.A., F.N.A.O., F.I.O., F.C.O., M.P.S.

50 HIGH STREET, BARNET, LONDON, N.

TANNIC ACID COMMERCIAL 60%

STOCKS AVAILABLE

BIDDLE SAWYER & CO. LTD.
EMPIRE HOUSE, ST. MARTINS-LE-GRAND, LONDON, E.C.1

WANTED. Supplies of DIGITOXIN (DIGITALIN CRYST.)

Offers to CDB/169 Office of this Paper

FOR SALE

NATIONAL Cash Register, practically new, keyboard to £1 19s. 11½d., automatically adds and prints totals. Real bargain. No dealers. Write Box S18, Willings, 362 Gray's Inn Road, W.C.1.

WANTED

TABLET machines, new and/or secondhand required immediately for cash. Full details to 369/529, Office of this Paper. WANTED, Avery Personal Weighers (1d. in slot), also Cash Registers, National, Remington, or Gledhill, any quantity entertained. Cash on sight, fair price certain. Phone HARROW 3991. Deiches, 4 Pinner Road, Harrow, Middlesex. Also SALES, SERVICE AND REPAIRS (estimates free).

MISCELLANEOUS

LIMITED Company Registration. For a long period I have advocated for individual chemists trading on these "Safety First" lines. Pre-war charges and details. Make a note of my address or write now: A. B. Slack, 721 Princess Road, West Didsbury, Manchester.

BUSINESSES FOR DISPOSAL

BUSINESS (Branch) for Sale. No agents. Genuine, audited; reasonable price; seaside; N.W. (Considered safe area.) Not seasonal. Increasing residential trade. Full particulars on application to genuine buyers only. Bank references. 351/1 Office of this Paper.

FACTORY for Sale. Well equipped with Pharmaceutical, plant. Ample ground for extension. 160 miles west of London. Residential area. 345/10, Office of this Paper.

BUSINESS WANTED

BUSINESS Required. Good class pharmacy in good position, small N.H.I., no optics, safe area, non-industrial, turnover £2,500/£4,000. Lock-up or with good living accommodation, garden preferred. Must bear investigation as to turnover, overheads, net profit, reasons for selling, etc. Cash purchase. Banker's reference if required. Please send full particulars, which will be treated as strictly confidential. No agents. W. M. Nicoll, M.P.S., "Duntrune," Burnoy Road, Westhumble, Surrey.

AGENCIES

GENTLEMAN, late Representative well-known firm for 17 years, desires Agencies for good-class Pharmaceutical or Toilet Specialities. Excellent connexion Midland area. Write CDB/165, Office of this Paper.

BUSINESS OPPORTUNITIES

ADVERTISER having £3,000 quota to spare under Class 16 of the Limitations of Supplies Act would consider handling portion of turnover reputable firms. 369/530, Office of this Paper.

SITUATIONS OPEN RETAIL (HOME)

LEEDS Industrial Co-operative Society, Limited, require the services of an Unqualified Male Assistant (exempted from military service). Applicants must be smart and thoroughly acquainted with all branches of the trade. Apply stating age, experience and fullest particulars (including salary required) to the Secretary, 10 Albion Street, Leeds, I, endorsed "Pharmacy."

LONDON. Unqualified Assistants, male and female, required in various districts. Good all-round knowledge of Chemists business essential. Apply by letter in the first instance to CDB/171, Office of this Paper.

LONDON, E. Assistant (Qualified preferred but not essential) for middle-class trade and N.H.I. Dispensing. Give full particulars of experience, names of references, age, when disengaged, and salary required. Apply (letter only), "Chemist," 300 Amhurst Road, London, N.16.

ASSISTANT PHARMACIST required by Middlesex County Council. Must hold one of the qualifications of Pharmaceutical Society. Salary £200 rising to £250 p.a.

Whole-time duties under supervision of Medical Superintendent and Pharmacist. Unestablished, subject to medical exam. and one month's notice.

Application to Medical Superintendent, "L.I." Staines Emergency Hospital, London Road, Ashford, Middlesex. No application forms provided. Relationship to any member or officer of Council to be disclosed. Copies of not more than three recent testimonials. Canvassing directly or indirectly will disqualify. Closing date 5th October, 1940.

BIRMINGHAM. Young qualified Assistant required for suburban business. Must be accurate Dispenser, good Window Dresser, and knowledge of Photography. Apply, giving full particulars and enclosing snap if possible to 349/5, Office of this Paper.

CHEMIST, M. or F., to take charge of a new good class business, Swiss Cottage. Apply, 12 Northways Parade, N.W.3. One with knowledge of foreign trade preferred.

LADY Assistant required. Reply, stating age, experience, etc., C. Harry, 366 Richmond Road, Twickenham.

PHARMACY. Female Assistant required; must have had pharmaceutical and general shop experience. Wages rising to 54s. plus war bonus, at 25 years. Widows and single persons only considered. Apply in writing, stating age and experience, to the Staff Manager, Royal Arsenal Co-operative Society, Ltd., 113 Powis Street, Woolwich, S.E.18. Endorse envelope "Pharmacy." Note: Canvassing of members of the General Committee or Officials will disqualify.

QUALIFIED Assistant required for Dispensing and Family Retail business. Apply, giving age, experience, height, salary required, etc. Photo, to be returned. Permanency. S. Davis, Chemist, Ashleworth, Gloucester.

QUALIFIED Junior (Male or Female); easy hours. Full particulars to Hope's, Chemist, Park Street, Southend-on-Sea.

QUALIFIED Male Assistant, capable of taking sole charge, required immediately. Knowledge of optics preferable. Must be reliable and well-recommended. Age 25-30. Usual particulars to 70 Ripple Road, Barking, Essex.

QUALIFIED Manager (male), outdoors, required for good class family dispensing business, 30-40 years of age. Apply, stating age, height, salary required to Exors. T. Evans, 114 Upper Richmond Road, Putney, S.W.15.

UNQUALIFIED Female Assistants, 21 years of age or over, required for senior positions in Pharmacy Department. Permanencies with good hours, wages and war bonus to suitable applicants. Apply stating age, experience and fullest particulars, to the Secretary, Leeds Industrial Co-operative Society, Ltd., 10 Albion Street, Leeds, 1, endorsed "Pharmacy."

WANTED. Assistant Optician. Qualified O.B.A.C.; permanency; lady or gentleman chemist qualifications an advantage. State age, height, experience, salary required, with photo.—Apply, Albert Hagon, Limited, Chemists and Opticians, Cardiff.

WANTED Qualified Chemist. Smart appearance, good salesman and window-dresser, honest and trustworthy. Write, stating age, salary expected, when free to commence duties, experience, or call to K., 77 High Street, Camden Town, London, N.W.1.

WHOLESALE

AN Experienced Travelling Representative covering all Scotland, own car, exempt military service, own business affected by war, open for additional representation for duration. 369/528, Office of this Paper.

CONTROL Clerk Wanted; administrative ability with pharmaceutical experience, invoicing; costing; checking essential. £50,000 annual sales. Details on application form from Ten Acres & Stinchley Co-op. Society, Ltd., Umberslade Road, Birmingham, 30.

EXPERIENCED invoice-clerk (male) wanted, must be fully conversant with medical business as distinct from chemists. Progressive salary for suitable applicant. Apply stating age and full particulars to Reynolds & Branson, Ltd., Wholesale Chemists, 13 Briggate, Leeds, 1.

EXPERIENCED Traveller required to take over established connexion. Calling on doctors in London and Home Counties. State fully experience and salary required to 369/532, Office of this Paper.

INVOICE Clerk required for London Wholesale Druggists. Write, stating experience, etc. 365/381, Office of this Paper.

LABORATORY Assistant required, with working knowledge of toilet preparations, shampoos, etc. Experience in tablet making an advantage. Write age, sex, experience and wages required to E. H. Ltd., 20-26 Lambs Conduit Street, W.C.1.

MANUFACTURING Chemists in Midlands require Laboratory Assistant with knowledge of the manufacture of extracts, tinctures, etc. Write, giving age, experience and salary required to 369/531, Office of this Paper.

PHARMACISTS required to act as professional representatives. Previous experience not essential. Apply by letter giving age, other particulars and enclosing copy of recent photograph. 369/527, Office of this Paper.

RELIABLE Man required to assist in stock rooms of manufacturing chemists. Knowledge of drug trade not essential. Reply, stating age and particulars of experience. 369/533, Office of this Paper.

REQUIRED by pharmaceutical manufacturers in London, chemical worker with experience in tablet making and general pharmaceutical manufacture; must be adaptable and accustomed to plant control; age over 35. State experience and salary required to 369/534, Office of this Paper.

TABLET Maker and Sugar Coater wanted for London Wholesale Druggists. 365/382, Office of this Paper.

T. F. BRISTOW & CO., LTD., Colindale, London, N.W.9, require Resident Representative for Yorkshire; must have a profound knowledge of the trade, customers and territory and not be liable for military service. Remuneration—salary, commission and expenses. Car provided.

WELL-known northern manufacturing chemists require Representative to replace enlisted man for old-established connexion in North Wales and Midlands. Applicant must be exempt military service. Apply stating age, experience and salary to CDB/170, Office of this Paper.

WORKING Chemist wanted at once for Patent Medicine Works, North London district. Knowledge of weighing and testing materials used. Write experience, age, wages, etc., Box 155, c/o Pool's, Brettenham House, Strand, W.C.2.

COLONIAL

AN opening occurs in Southern Rhodesia for a smart capable young fellow (single) as Assistant in a first-class Drug Store, must be fully qualified Chemist and with Optical knowledge and experience (capable of efficient sight testing). Salary £35 month, four-year contract, passage outward paid. Communicate in first instance with John Palmer, Junr., & Co., Imperial House, Dominion Street, London, E.C.2, giving fullest details, qualifications and age.

SITUATIONS WANTED

RETAIL (HOME)

UNEMPLOYMENT

In order to assist employees who have lost their employment, either through enemy action or through businesses being closed down in defence areas, a scheme of free advertisements in the "Situations Wanted" column of this Supplement will be available from October until further notice.

Any such employee of a retail pharmacist whether qualified or not, or any employee of works producing or distributing products in connexion with the drug and associated industries is invited to make full use of this facility without charge.

Advertisements should be accompanied by particulars of last employment and cause of its termination, and should be addressed to The Publisher, The Chemist and Druggist, The Pitman Press, Bath, to arrive not later than WEDNESDAY morning of week of issue.

LADY Assistant, unqualified, all duties, not dispensing, 14 years' experience. C. H., 18 Avenue Crescent, Acton, W.3.

PHARMACIST (35), F.S.M.C. and O.B.A.C. register; ten years' personal experience high-class pharmacy, desires Managership; permanency; private or company; due to war conditions. West End and Continental experience high-class Toilets; wines and spirits; used to busy business; thoroughly experienced all branches Pharmacy. Salary, £5 per week. CDB/167, Office of this Paper.

PHARMACIST, young, free immediately, excellent experience including several years West-End. Manager or assistant. Sheridan, 118 Hamilton Road, N.W.11.

QUALIFIED (24), over 6 feet, well recommended, leaving present situation for bona fide reason, seeks Progressive Permanent Post. Branch Managership preferred but not essential. Wide experience in all branches of the business including window dressing and photographic. Excellent references, investigation welcomed. CDB/168, Office of this Paper.

QUALIFIED Manager disengaged through enemy action requires similar position; 18 years' experience with four assistants in old-established firm. C. E. H., 94 Thurlow Park Road, W. Dulwich, S.E.21.

WHOLESALE

REPRESENTATIVE, Midlands, seeks engagement. Good house; drugs, Proprietaries or Toilets; chemists' connexion. Retail and wholesale. Married. 44. Own car. 1615 Stratford Road, Hall Green, Birmingham.

TABLET Maker and Sugar Coating, etc., thorough practical experience in all branches, able to control staff. Late first-class wholesale manufacturing chemists in London, P.C.B. 347/9, Office of this Paper.

Trade Report

TARTARIC ACID (B.P. CRYSTALS).—Makers' nominal quotation has been advanced to 2s. 8½d. per lb., less 5 per cent. discount, with supplies reserved for regular consumer customers.

CREAM OF TARTAR (B.P.).—Makers' nominal price has been advanced to 227s. per cwt., less 2½ per cent. discount. Supplies are restricted to regular consumer customers.

SEEDS.—All markets are quiet, with little business passing. **ANISE.**—Spot, Bulgarian, 85s. in bond, and 90s., duty paid. **CANARY.**—Spot, Morocco, 46s., duty paid. **CARAWAY.**—Spot, Dutch, 185s., duty paid, for one- to two-bag lots only. **CORIANDER.**—Spot, Morocco, 45s.; duty paid, ex wharf London; 42s. 6d., duty paid, quoted ex store Liverpool. **CUMIN.**—Spot, A few bags available only. 135s., duty paid; quoted. **DILL.**—Spot, Indian, 11 per cent., 47s. 6d., ex store Liverpool. **FENNEL.**—Spot, Indian, 6 per cent., 55s., duty free; Iran, 52s., in bond. **FENUGREEK.**—Spot, Morocco, 22s., duty paid, ex wharf London, and 21s., duty paid, ex store Liverpool. **MUSTARD.**—Spot, 65s. to 72s. 6d., according to quality.

TURMERIC.—Spot, Madras and Rajapore finger, 45s. quoted.

PCMX

PARACHLORMETAXYLENOL

For use in:—

ANTISEPTIC FLUIDS
SPRAYS
MOUTH WASHES
GARGLES
TOOTHPASTES
LOTIONS
PASTILLES
OINTMENTS
ETC.

The modern basic germicide.

Highly toxic to bacteria
but practically non-poisonous
and non-irritant to man.

Soluble in spirit and in water.

Prices, literature, samples and
co-operation on request.

MONSANTO CHEMICALS LIMITED

RUABON, WREXHAM, DENBIGHSHIRE

Telephone Ruabon 3191



**When Sulphanilamide is prescribed
dispense**

STREPTOCIDE

(For Human and Veterinary Use)

It costs no more to dispense the best



The Evans organisation was amongst the first to recognise the potentialities of Sulphanilamide in the field of chemotherapy and the resources of the Evans Biological Institute were directed to its production in a pure form.

Whenever Sulphanilamide, Sulphonamide or Sulphonamide P is prescribed, the use of Streptocide will maintain your reputation for dispensing highest grade chemicals without extra cost.

The demand for Streptocide for veterinary purposes is rapidly increasing and it may be sold to farmers without a veterinary surgeon's prescription (vide Ph. Jl. 6.7.40).

Streptocide is available — both for human and veterinary use — in the form of tablets, powder, solution, cream and ointment.

Booklets entitled "Chemotherapy with Streptocide" and "Streptocide in Veterinary Practice" are available on application.

EVANS
EVANS SONS LESCHER & WEBB LTD. LIVERPOOL AND LONDON

THE CHEMIST AND DRUGGIST **EXPORT** SUPPLEMENT

A reliable guide for
export buyers of drug
trade merchandise.

Distributed only with
the overseas edition of
the Chemist & Druggist

28 ESSEX STREET, STRAND, LONDON, W.C.2



METHYL SALICYLATE

B.P.

MONSANTO CHEMICALS LIMITED

Ruabon, Wrexham, Denbighshire

Cables: Monsanto, Ruabon

PILLS, TABLETS and CAPSULES

The Specialized Products
of

HOWARD LLOYD

& CO. LTD.

MANUFACTURING CHEMISTS

LEICESTER

BRITISH FINE CHEMICALS

The importance of the British pharmaceutical and fine chemical industry goes far beyond the realms of pharmacy and medicine; the basic manufacturing industries of the country owe most of their well-publicised improvements to British-produced fine chemicals. In this age of rapid developments, the efficiency and progress of every industry is to no small extent measured by the results achieved in the works laboratory in which British fine chemicals are now in common use. Many products that are admittedly fine chemicals are now being produced at prices which even allow for their bulk use in industrial processes, thus adding to the prestige of British manufacturers. This almost limitless field of technical chemicals is still being developed.

Progress in the manufacture of pharmaceutical and medicinal chemicals has been on the broadest of lines, and a feature of importance is the standardised high quality of these products. Overseas buyers who have in the past drawn their supplies from Germany and other Continental markets, which are not now open to them, can obtain adequate supplies from British manufacturers without delay. Years of persistent research have resulted in the manufacture in this country of comprehensive groups of medicinal specialities. This comparatively new branch of the industry seems certain to become of even greater importance.

Without exception, the record of the past twenty years of the industry is one of expansion involving increased output and the production of new products; this has involved the outlay of huge sums of money in plant, equipment, buildings, and so forth. The

BUSH

for

PHARMACEUTICAL CHEMICALS

W. J. BUSH & CO. LTD.

ASH GROVE, HACKNEY
LONDON, E.8, ENGLAND

Cables: TANGERINE, LONDON

ALBOLENE CLEANSING CREAM

McKESSON &
ROBBINS LTD.
EAGLE HOUSE, CANNON ST.
LONDON, E.C.4

SPECIAL EXPORT
TERMS ON
APPLICATION

CALOX OXYGEN TOOTH POWDER

Mention this Supplement when communicating with advertisers. It helps to identify you.

ALKALOIDSFINE CHEMICALS
& OPIUM DERIVATIVESSALICIN · CAPSICIN · CANTHARIDIN
ERGOTIN · CHLOROFORM
ATROPINE · EMETINE · SCAMMONY
& JALAP RESINS · HYOSCYAMINE
CHLORAL HYDRATE · EPHEDRINE
MORPHINE · CODEINE
STRYCHNINE · CAFFEINE · ETC.**T. & H. SMITH LTD.**

EDINBURGH, 11 · LONDON, E.C.2 · GLASGOW, C.1

numbers of people engaged in the industry are now counted in their thousands, including a large number of highly-qualified men and women. Overseas buyers of pharmaceutical chemicals, medical specialities or chemicals for laboratory and technical purposes now have at their disposal a full range of British-manufactured products of unequalled quality.

**BRITAIN****DELIVERS THE GOODS****PROGRESS OF THE BRITISH
FINE CHEMICAL INDUSTRY**

By F. L. Pyman, D.Sc., Ph.D., F.I.C.,
F.R.S., Chairman of the Medicinal Chemi-
cals Sub-group of the Association of
British Chemical Manufacturers.

The outbreak of war in 1914 found the British fine chemical industry unprepared. Synthetic drugs had for the greater part hitherto been imported from Germany, and in consequence there was a famine of many of these compounds and prices rocketed accordingly. During the war of 1914-18, the country's fine chemical industry expanded greatly, and many firms, whose interests had previously been mainly pharmaceutical, began the manufacture of fine chemicals. This movement was encouraged after the war by the protective Key Industries Act, 1921, which levied a duty of 33½ per cent. on the import price of such chemicals as were placed on the list drawn up in connexion with the Act. The fine chemical industry was also assisted by the war and post-war expansions of other branches of the chemical industry, and here again legislation assisted development.

The creation of a powerful dyestuffs industry in this country, which arose as a result of the last war, led to the production of many intermediates that could be used by the fine chemical as well as by the dyestuffs industry. This development was fostered by the Dyestuffs (Import Regulations) Act, 1920, which enables the import of dyestuffs and dyestuffs intermediates to be regulated by a licence system under which the Board of Trade can prevent the importation of the above at such time as the products can be home-produced. A further consequence of the war of 1914-1918

**JOHNSONS
OF HENDON, Eng.**CAN ATTEND TO YOUR
REQUIREMENTS FORSILVER NITRATE
SILVER PROTEINATE
SILVER VITELLIN
GALLIC ACID PURE & TECH.
TANNIC ACID LEVISS & TECH.ALSO FOR ALL
PHOTOGRAPHIC,
FINE & TECHNICAL
CHEMICALS**C. J.
HEWLETT & SON
LTD.***Manufacturers of the finest Pharmaceutical
Preparations***FOR OVER 100 YEARS**STANDARDISED TINCTURES
DECOCTIONS INFUSIONS
PILLS and TABLETS
HYPODERMIC INJECTIONS
OINTMENTS CAPSULES
SURGICAL INSTRUMENTS
DRESSINGS**35-43 Charlotte Rd., London,
E.C.2, Eng.****"DREADNOUGHT"
BRAND****Finest Qualities, Careful Packing
MODERATE PRICES**All Medical Requirements including
Drugs, Chemicals, Ampoules, Pills,
Tablets, Capsules, Packed Goods
(ready for resale), Druggists' Sundries
and Surgical Instruments.**GALE BAISS & CO. LTD.
LONDON, S.E. 15**Established over One Hundred and
Fifty YearsContractors to British, Colonial
and Foreign Governments

are manufacturers of
Fine Chemicals
Special Medical Products
Pharmaceutical Specialities
Veterinary Preparations
Horticultural Products
Toilet Specialities, Perfumery, Soap
**Boots Products are manufactured
under scientifically controlled
conditions and must pass exacting
tests in our own Analytical,
Bacteriological or Pharmacological
Laboratories before issue**
Enquiries welcomed

**EXPORT DEPARTMENT
BOOTS PURE DRUG CO. LIMITED
Station Street
NOTTINGHAM ENGLAND**

BRITISH MADE

★ **NIPAGIN**
★ **NIPASOL**
★ **NIPABENZYL**
★ **NIPACOMBIN**
★ **NIPA 49**PRESERVATIVES, ANTISEPTICS
and ANTIOXIDANTS for all
Pharmaceutical, Cosmetic, and
Technical purposes.●
NIPA LABORATORIES LTD. Treforest
Nr. Cardiff

Sole Distributors:—

**P. SAMUELSON & CO.
17 CREECHURCH LANE, LONDON, E.C.3**

StaffAllenS

for your

**POWDERED DRUGS
POWDERED GUMS
ESSENTIAL OILS**



Stafford Allen & Sons, Ltd., Wharf Road,
London, N.1. 'Phone CLERkenwell 1000
(7 lines)

TAS/AL 26



EXPORTERS OF :

**PHARMACEUTICAL CHEMICALS
ALKALOIDS
HORMONE AND ENDOCRINE
PRODUCTS
VITAMIN PRODUCTS
BOTANICALS AND DRUGS
ESSENTIAL OILS, etc., etc.**

BIDDLE, SAWYER & Co. Ltd.

EMPIRE HOUSE
ST. MARTIN'S-LE-GRAND • LONDON, E.C.1

IODINE PREPARATIONS

BROMIDES IODIDES MERCURIALS
ATROPINE CAMPHOR NICOTINIC ACID
SALICIN CAFFEINE EMETINE
QUININE STRYCHNINE NICOTINE
VERMILION PRUNELLA
ESSENTIAL OILS CLOVE OIL
SANDALWOOD OIL ALMOND OIL
EXT. OF IPECAC. LIQ. DRUG GRINDING

Whiffen
& SONS LTD

FULHAM, LONDON

was the formation of the Association of British Chemical Manufacturers (A.B.C.M.), a body which has been of great importance to the chemical industry by forming a channel through which the views of the industry as a whole can be expressed to Government Departments. The Association has also facilitated co-operation among manufacturers.

During the last war, many simple fine chemicals, such as bromides, aspirin and phenacetin, became enormously expensive, and when the source of German proprietary preparations dried up, British substitutes were only slowly forthcoming to replace them. The outbreak of the present war found us much better prepared. Firms which had developed their fine chemical departments during the last war continued to strengthen them, and to build up strong research departments. Other firms entered the industry, and there are now sixty-seven well-established firms in the fine chemical group of the A.B.C.M. So far as medicinal chemicals are concerned, it may be said that practically every essential compound is now manufactured in this country.

Although there have been some increases in the prices of chemicals, the position is entirely different from what it was during the early months of the war of 1914-18. To take two examples, the price of salicylic acid B.P. was 11½d. per lb. in 1913, it rose to 22s. during 1916, falling to 5s. in 1916 when British manufacturers entered the market; in August 1939 the price was 1s. 7d. per lb., and has risen to only 1s. 8d. at the present time. Again, potassium bromide B.P. sold at 1s. 6½d. per lb. in 1913, rose to 25s. by February, 1916, falling to 5s. 9d. by the end of 1916; in August 1939 the price was 1s. 7d. per lb., and has since risen to only 2s. 2d. in spite of currency depreciation.

British firms have already produced equivalents of many of the German proprietary preparations, such as, for example, bromethol, hexobarbitone, iodoxyl and mepacrine, and the number is being steadily increased.

The expansion of the fine chemical industry has inevitably led to the extension of the research facilities of British firms, and, although much of the energy of research departments has been concerned latterly with process development, fundamental work has also been carried out, and it is a source of pride to the British industry as a whole that one of the most important discoveries in the realm of chemotherapy, namely that of sulphapyridine, has been made by a member of the A.B.C.M.

EXTRACTS

**TINCTURES RESINOIDS
OLEO-RESINS MEDICINAL RESINS**

Specially Prepared
Non-Alcoholic
Soft Extracts for making
Liquid Extracts,
Tinctures,
Concentrated Infusions,
etc.

WILLIAM RANSOM AND SON LTD.
HITCHIN - LONDON
MANUFACTURING CHEMISTS - EST-1846

"Graesser"
QUALITY

PHENOL
META-PARA CRESOLS
ORTHO CRESOL
CRESYLIC ACID
XYLENOL MIXTURES

Careful service and reliability based on 40
years' experience in these products.

N. H. GRAESSER

The Chemical Works. Sandycroft, Nr. Chester

'Grams: "Graesser, Chester."

SALICYLATES

All products are made under strict
laboratory control under direct super-
vision of technical experts

ACETATE OF SODA
ASPIRIN B.P.

SODIUM SALICYLATE B.P.
SALICYLIC ACID B.P.
ORTHOCRESOTINIC ACID
SODIUM PHENATE, ETC.

Enquiries invited for both B.P.
and commercial qualities

**GRAESSER SALICYLATES
LTD.**

SANDYCROFT · CHESTER · ENG.

**TOILETRIES
AND
CHEMIST'S SUNDRIES****WATERPROOF
SPONGE BAGS
HOLDALLS****FITTED TRAVEL CASES****NERISSA**
MADE IN ENGLAND**POWDER
PUFFS****Watersprite**
MADE IN ENGLAND**NON-STRETCH
FACE CLOTHS****CORN PLASTERS, WRIST STRAPS
MANICURE REQUISITES
SPORTS AND SURGICAL EYESHADES, etc.****SOLPORT
BROTHERS LIMITED**184/192 Goswell Road, LONDON, E.C.1
Tel. Clerkenwell 2472 (3 lines)**THE BEST THAT BRITAIN
PRODUCES DAWN
RAVEL-PROOF FACE CLOTHS**

"DAWN" Ravel-proof Face Cloths are made in a wide range of qualities, in assorted colours and attractive packings. They are the only Face Cloths which never get slimy, and the individual anchoring of every thread into the fabric increases their life. We also produce a wide range of WOVEN Face Squares. In short—we have the styles and prices YOU require.

Every process for the making of our Face Cloths is carried out in our own Works—from the making of the fabric to the packing of the goods for display.

JACQUESIL FABRICS LTD.
RED BANK MILLS, RADCLIFFE, Lancs., Eng.

Jeannette
POMEROY
Beauty Preparations

29, OLD BOND STREET, W.1.

supply all that women need in cosmetics. These are some of the most popular products:

SKIN FOOD
in four sizes.

VANISHING DAY CREAM
in three sizes.

BEAUTY MILK
in three sizes.

ASTRINGENT LOTION
in three sizes.

★ **FACE POWDER** ★
six shades and three sizes. ★

Enquiries to:
F. W. Hampshire & Co., Ltd.,
Sunnydale Works, Derby, England.

AS OTHERS SEE US

(Contributed)

There are grounds for congratulation in the way the British manufacturing firms have responded to the Government's appeal for the development of export business and in the Government's recognition that it has an essential part to play in the war effort. If one asks the reason for the success which the Germans have achieved in world trade, one must go back for an answer to long before the Hitler regime. True, the Nazis brought to a fine art the system of state subsidies against which private enterprise found it perfectly impossible to compete. The effect which these state subsidies had in transforming Germany into a truly socialist state is outside the scope of these few remarks. But in addition to this method, which obviously can only be countered by the same method here with an inevitable upset in our orthodox monetary system, the real reasons for the German success lie deeper. State subsidies only strengthened the German hold on international trade, they did not initiate it.

Many years ago new production methods were put into force—possibly only practicable amongst a nation so well regimented as the Germans—which reduced costs and which improved efficiency. An arrangement was set up whereby manufacturers were grouped as producers of this or that commodity and one firm was recognised as the producer of this or that commodity, supplying all other firms. Such centralisation of production effected obvious economies though a buyer could be disconcerted if he declared that he preferred one maker's output to another when, possibly, the only difference in the two was the label.

Another important point upon which the Germans concentrated their attention was one that has been dinned into the ears of British manufacturers with not very much effect for many years past—the system of appointing their own representatives in the various markets; men who have received a thorough grounding in the factory; who know its organisation, its potentialities, its background; who can speak the language of the country in which they are located and who, having been appointed to a position of responsibility were treated as responsible persons and given virtually *carte blanche* in the way of control and expenses. Most of these managers were given authority to appoint native representatives—people who knew the trade and who had the *entrée* to the most important buyers. British firms,

The
IGLODINE Co., Ltd.,
Newcastle-upon-Tyne,
England

Manufacturers of the
WELL KNOWN
ANTISEPTIC

IGLODINE

Invite enquiries for sole
agencies.

LYSOTAB

(Pat. 118667)

Highly concentrated disinfectant in
a safe, solid form.

No fluid to spill and waste.

No bulky containers to store.

No need to guess quantities.

Just handy cubes ready for instant
use—one cube will provide 2 gallons
of powerful disinfectant.

Safe to handle—safe to carry—will
not dry up.

Ideal for the tropics and countries
where transport facilities are limited.

Manufactured in England by
SOLIDOL CHEMICAL LTD.
LONDON, S.E.1

**HOME DYES
FOR OVERSEAS****'DRUMMER'
DYES**

WORLD FAMOUS,
THE PREMIER
BRITISH HOME DYE

'JIFFY' DYES

POPULAR DYES
AT A POPULAR PRICE

HOME DYEING IS POPULAR
THE WORLD OVER

MADE BY **WM. EDGE & SONS, LTD.**
BOLTON, ENGLAND

BRITISH MADE
PERFUME SPRAYS



**THROAT AND NASAL ATOMISERS
BRILLIANTINE & DISINFECTANT SPRAYS**

**All types of Sprays and Atomiser
Parts made to customers' own
specifications.**

Manufactured in England by
THE GARDNER COMPANY (LONDON) LTD.
7 CHAPEL LANE
MILTON STREET
LONDON, E.C.2

AVA The ORIGINAL
and still the
BEST SOAPLESS SHAMPOO

Because AVA contains an exclusive patented ingredient, it remains supreme... unsurpassed for perfect cleansing and lustrous, silky beauty in any shade of hair.

**AVA
TOILET
SOAPS**

Delightful range, attractively packed, six fascinating perfumes—Chelsea Flowers, Autumn Leaves, Summer Morn, Morning Mist, Sandalwood, White Heather.



You can recommend AVA with confidence—in powder or liquid form—and be sure of repeat custom.

AVA LIMITED, 9 PARK HILL, LONDON, S.W.4

WHITE FLINT
GLASS CONTAINERS

OF HIGH QUALITY
AND
BRITISH MANUFACTURE
AT COMPETITIVE PRICES

**MEDICAL BOTTLES
VIALS
TABLET BOTTLES
POMADE JARS**

Enquire for Quotations and Samples
of our Products:

**NATIONAL GLASS WORKS
(YORK), LTD.**
FISHERGATE - YORK - ENGLAND

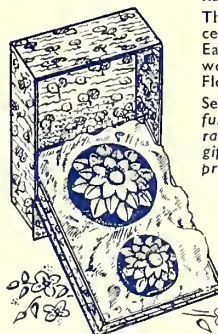
although they are now showing signs of realising the wisdom of the German policy, still display a reluctance to trust their overseas representatives sufficiently, with the result that the prestige of the representatives and the business of the home firms alike suffer.

Special mention must be made of a field of industry which the Germans have made peculiarly their own—the medical speciality business. Not only in inventiveness but in long-range planning, the Germans have proved themselves to be masters in this immensely profitable field. For years past, British chemists—reinforced by a stream of refugees of outstanding academic attainments—have been available and a good opportunity has presented itself for research groups to be formed, concentrating on this or that field of chemistry. The young chemist does not ask for big money and would willingly work for a modest remuneration if a commission is secured to him on eventual sales of his discoveries. Even the more commercially minded of these young research men would accept such an arrangement if they understood that their discovery would be launched on the market with imagination, persistence and without expectation that there would be a quick return on the outlay. At least three years' heavy losses may be anticipated with most medical specialities, but the eventual turnover in most cases proves more than recompense. To be fair, some firms have recently shown signs of recognising the technique of the German method but they are still too few in number. In addition, the Germans have for long appreciated the fact that there need be no divorce between industry and science. Here some progress has been made, but not enough. There are scientists of high academic standing who can be retained in a consultative capacity or to collaborate with commercial firms without detriment to either but to the benefit of both.

While criticisms might be made of the rather unhelpful attitude of certain countries in the British Empire to fostering trade with the Mother Country, yet that does not relieve firms in the Mother Country from their responsibility for leaving markets where sentiment is overwhelmingly in their favour to the exploitation of foreign countries, whose methods—apart from state subsidies—are open to us.

[Some of the opinions expressed by our contributor are controversial, and in publishing them we do not necessarily indicate that we agree with them.—THE EDITOR.]

New Ideas
in **ZENOBIA**
GIFT PERFUMES



Hand Painted Zen-art Glass
The newest and most acceptable Gift presentation. Each bottle filled with the world-famous ZENOBIA Flower Perfumes.

Send for illustrated list in full colour showing wide range of new designs and gift sets. Special Export prices.

ZENOBIA LIMITED
(Estab. 1899)
LOUGHBOROUGH
ENGLAND

**THERE ARE FEWER
GREY HAIRS IN THE
WORLD TO-DAY!**



**A NEW RANGE
OF MEN'S HAIR
PREPARATIONS**
Based on new scientific discoveries

SEND FOR FREE BOOKLET—
A real text book on hair and scalp treatment. TELOTA is well represented abroad, but there are still some countries for which agents are required.

TELOTA
HAIR DARKENING
POMADE
(One of the TELOTA range)

Invented and Manufacture Controlled by
W. J. N. SWANN, M.Sc., A.I.C., TELOTA COSMETIC Co., BLACKPOOL, Eng

**Specialists in
Quality Glass
Containers**



BOTTLES FOR:—
PERFUME, COLOGNE
LAVENDER, TALCUM
SMELLING SALTS
NAIL VARNISH
IODINE & DRUGGISTS
REQUIREMENTS, also
JARS FOR CREAMS
POMADES, ETC. ALL
WITH BLACK OR
COLOURED PLASTIC
CLOSURES.

PATENTEES OF THE "CHEKALEKE" PLUG
WHICH PREVENTS LEAKAGE AND EVAPORATION

**THE INTERNATIONAL
BOTTLE COMPANY LTD.**
48 FORE STREET, LONDON, E.C.2, ENGLAND
CABLES: INTERNATIONAL BOTTLE LONDON

MOORLAND Brand**Pharmaceutical Specialities****MOORLAND INDIGESTION TABLETS**
PENETROL INHALANT, TABLETS,
DROPS**PILICON Brand OINTMENT**, for Internal
and External Piles**PIXYLATORS** for
Headaches & Nerve
PainsAcid. Acetylsolicyl.
Phenacetin. Caffeine
Cadein phasph.**ELIXIR JAFFOL****Children's Tonic**Vitamin A. C. & D. in
glucose and orange
juice syrup.**"ADRAX" TREATMENT FOR THE**
KIDNEYS & BLADDER(White Tablets) Patos Citros. grs. 10. Patos Acetas.
gr. 10. Patos Bicorb. grs. 12½ (Brown Tablets) Alaes
gr. 1. Patos Nitros gr. 1. Asafoetida gr. 1. Methyl-
thianin Hydroch gr. ½. Capsicum gr. ½. Ol. Juniper m. ½**PERFUMES, Alcoholic & Non-Alcoholic,**
Pomades, etc.**W. B. CARTWRIGHT, LTD.,** Rawdon, Leeds, EnglandAgents wanted in Countries where not already
represented**FENASCO**
TABLETS for Colds
Acid. Acetylsolicyl.
Phenacetin. Dover's
Powder.**CREO Brand**
BRONCHIAL and
CATARRH SYRUPLacto Creosote Calc.
Lactophosph. Codein
phasph. Ol. pine, etc.**BRITISH PHARMACEUTICAL
CHEMICALS**

This main branch of the British fine chemical industry has never been in a stronger position than it is today. Surveyed from all points, it is comprehensive, efficient, modern, and yet still capable of further expansion to meet all home and overseas requirements. The progress of the past twenty years is really astonishing, and is the due reward of a determination to make full and proper use of the assistance afforded the makers during that time. Practically every manufacturer has carried out a programme of development which has included the recognition of the laboratory as of first importance to progress and the gradual building up of experienced and highly competent scientific staffs.

Some of the outstanding developments are well worth recording. The manufacture of bromides is an instance. Up to a few years ago, the makers were dependent on foreign bromine, and were in consequence producing under unsatisfactory commercial conditions. Bromide salts are now made from what is in effect Empire bromine obtained from the Dead Sea deposits, and they are finding increasing favour in all parts of the world. Salicylates and aspirin are by no means new products to be produced in this country, but the position of the home makers is now no longer dominated by outside competition. The quality of British aspirin now being produced is equal to the best in the world, and output has increased very substantially during recent years. Adequate supplies are also being produced of all the salts of bismuth, mercury, iodine and similar products and are available for export at economic prices, and it is satisfactory to note that shipments of these products have been steadily increasing. The bulk production of phenacetin and phenolphthalein in this country was recorded some few years ago, and these products are now offered at competitive prices.

Insulin.—The discovery of insulin was made some years ago, and it is generally accepted that this was one of the outstanding medical discoveries of the century. When originally introduced to the medical profession, insulin was much more toxic than it is at present owing to impurities that could only with difficulty be removed. In addition, there was the disadvantage that the price to the patient was almost prohibitive. Thanks, however, to British research work, which resulted in reduced cost of extraction and improved methods of purification, the price has been steadily reduced to its present low figure, and it can be stated practically with certainty that no diabetic

**H. & T. KIRBY
& Co. Ltd.**

Manufacturers of—

COMPRESSED TABLETS
PILLS, LOZENGES, etc.

and

ATTRACTIVE PACKED
LINES**WILLESDEN GREEN · LONDON**

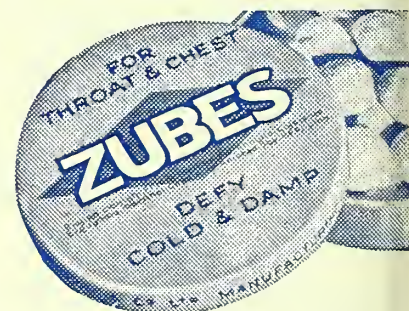
ESTABLISHED 1866

**HUXLEY BRAND
WINTOGENO**The original Menthol & Wintergreen Cream
with Eucalyptol, etc., is still available and
recommended as a warmth-giving medium
for:Cramp
Stiffness
Lumbago
Sciatica
Sore Throat

and as a relief for:

Tooth-ache
Headache
Back-ache, etc.Prepared in the Huxley Laboratories by
Anglo-American Pharmaceutical Co. Ltd.
Croydon, Englandand sold in all the large Towns in Egypt,
South Africa, Iraq, Iran, Afghanistan, North
East Africa, India, Straits Settlements, and
the Far East.**YEAST EXTRACT****VEGETABLE EXTRACT**in bulk supplies for
HOSPITALS
GOVERNMENT SERVICES
and **MANUFACTURERS**

MANUFACTURERS:

FREDK. BOEHM LTD.**17 JEWRY ST., LONDON, E.C.3****ZUBES ARE THE BIGGEST**
SELLING THROAT "SWEET" OF
THEIR KIND IN THE WORLDManufactured by F. W. Hampshire & Co., Ltd
Sunnydale, Derby, England**A NAME and a STANDARD****"SURE SHIELD"**

Reg. Brand

FRUIT LAXATIVESin demand in the Dominions
and all British Possessions**8½d. and 1/3 tins. Can supply**
unprinted tins for export**THOS. GUEST & Co., Ltd.**

Manufacturing Chemists

CARRUTHERS STREET, MANCHESTER, 4

ALL LONDON WHOLESALE HOUSES STOCK

ASK POTTER & CLARKE LTD FIRST

Exporters of

Lozenges, Pastilles, Pills,
Tablets, Capsules, etc.
Galenicals, Essential Oils.
We also have the largest
stocks of Herbs, Roots, Barks and
Seeds in the country



Also Proprietors and

Exporters of the World-famous
POTTER'S CATARRH PASTILLES
and POTTER'S ASTHMA CURE

POTTER & CLARKE, LTD.
60/64 ARTILLERY LANE, LONDON, E.1



MEDICAL SPECIALITIES
NOW
MADE IN ENGLAND

GYNOMIN (Spton)

IDOZAN

VALERIAN (Dragées)

OTOSCLEROL

Packings and Export Prices from

COATES AND COOPER LTD.

Manufacturing Chemists

94 CLERKENWELL RD., LONDON, E.C.1

DAKIN BROS. LTD.
LONDON, S.E.1

Trade  Mark

FOR OVER 100 YEARS—
we have specialised in the
manufacture and packing
of medicines for Export

Our long experience
your guarantee

GALENICALS • PACKED
GOODS • HOSPITAL
REQUISITES AND
DRUGGISTS' SUNDRIES

patient today need go without British insulin because of its cost. The standard reached by British insulin is an exceptionally high one. It is now successfully meeting all foreign competition, and receiving, as its purity merits, ever-growing recognition and favour in overseas markets.

Vitamins.—A number of manufacturers have specialised in the preparation of substances of biochemical interest, notably vitamins and the hormones. In numerous instances, this work has been entirely pioneering, particularly in regard to vitamins A, C and D, and to E concentrate. The manufacture of vitamin products is now one of importance in this country. The first vitamin to be prepared pure was vitamin D, immediately as irradiated ergosterol, and now available in a pure state as calciferol. The isolation of carotene, which is the yellow pigment occurring in many foodstuffs, typically in carrots, followed, and this substance is apparently the precursor of vitamin A in the vegetable kingdom. Vitamin C has for some time been isolated in a pure crystalline condition from neutral sources. It has also been prepared synthetically. This substance appears to be identical with ascorbic acid. Other substances of biochemical interest are glutathione, adenosine, tyrosine, alanine, cystine, adenylic acid, glycine, etc., which are now available to research workers. The discovery in about 1926 of the treatment of pernicious anaemia by means of raw liver was followed by the introduction of dry and liquid extracts of liver. Today, production is general and of high efficiency, the products being subjected to searching clinical tests before issue.

Alkaloids, etc.—The quality and high reputation of British-made alkaloids as, for instance, of opium and nuxvomica and of anaesthetic chloroform and ether, are too well known to need comment. The latter is now made from duty-free ethyl alcohol as well as from methylated spirits. Cocaine, supplies of which up to a few years ago had largely to be imported, is now being produced here, and supplies of most of the salts are now sufficient to meet both home and export demands. Another product that was formerly largely imported is santonin. Production in this country was undertaken some years ago, and despite fierce foreign competition is still being carried on. Other typical productions are molybdates, citrates, medicinal glucose, peptones, sodium morrhuate, zinc and cadmium guaiacol-sulphonates, magnesium phosphate (tri-basic) and chlorbutol. A wide range of hypnotics and anaesthetics has been

The British Distributors of *Lederle* Biological Products

invite application from Overseas
Agents for price list and terms.

Products include:

IMMUNE GLOBULIN (Human)
PERTUSSIS ANTIGEN (Detoxified)
TUBERCULIN PATCH TEST
(Vollmer)
SOLUTION LIVER EXTRACT
(Parenteral)
GLOBULIN MODIFIED
ANTITOXINS
Etc., Etc.

Communicate with

CHAS. F. THACKRAY, LTD.
THE OLD MEDICAL SCHOOL, LEEDS, I
ENGLAND

EVANS PILLS & TABLETS

and medicinal products made at
Evans Pharmaceutical Laboratories
Evans Fine Chemical Works
The Evans Biological Institute



EVANS SONS LESCHER AND WEBB LTD
LIVERPOOL AND LONDON

SPECIALISTS

for over 40 years
in the manufacture of:—

TABLETS & PILLS

LOZENGES, SUPPOSITORIES
GENERAL PHARMACEUTICAL
PREPARATIONS

● Packed under your own Brand
if desired

● EXPORT ENQUIRIES
INVITED

MATTHEWS & WILSON
LIMITED
Established 1894

6 and 8 Cole Street, London, S.E.1
Phone: HOP 2147-8 Grams: Pilleolum, Sedist, London

MEGGESON

WORLD RENOWNED

PASTILLES, LOZENGES, TABLETS

Meggesson & Co., Ltd. are the makers of

- MEGGESON Bismuth Dyspepsia Tablets
- 'VISTIC' Denture Fixative
- MEGGESON Glucose Barley Sugar Drops and Sticks
- 'MEGGEZONES' Pastilles or the Throat
- MEGGOIDS Liquorice and Menthol Pellets

All Prices are quoted F.O.B.

MEGGESON & CO. LTD.

LLEWELLYN STREET, LONDON, S.E.16

Telegrams: Meggeson, Southpark, London.

'Phone: BERMondsey 1741-2-3

HONICOSE

Palatable Glucose Products

IN SYRUP FORM

Honicose (Honey with Glucose Sugars)
Malt Honicose (Malt with Glucose Sugars)
Halicose (Halibut Liver Oil with Malt Honicose)

IN SWEET FORM

Honicose Barley Sugar Blocks
Honicose Malt Blocks
Halicose Halibut Liver Oil Blocks
Also in Caramels
Mixed Fruit Barley Sugar Blocks
After Dinner Digestive Mints
Real Fruits (Soft Centres)
Creamy Mints (Soft Centres)

Honicose Barley Sugar Sticks
Mixed Fruit Barley Sugar Sticks

HONICOSE FRUIT SQUASH—in 26-oz.

Bottles: Lemon, Lemon Barley, Lime, Orange, and Grape Fruit

HONICOSE PRODUCTS (SALES) LTD.
BURY . ENGLAND

**ROBERT GIBSON & SONS, LTD.**

Robert Gibson & Sons, Ltd., have for years made Lozenges, Pastilles, Compressed Tablets, and Boiled Sugars of the special standard quality for exportation abroad.

Particularly well known and generally accepted for their paramount strength are Gibson's Linseed Liquorice & Chlorodyne Lozenges in the original 7 lb. tin pack.

Another original pack is the Chocolate Worm Cake in $\frac{1}{2}$ gross tins—effective and palatable.

Mecca Pastilles registered in Australia, Canada, Ireland, New Zealand and South Africa are a cough pastille of supreme merit.

"Laroma" Cachous—the breath of spring flowers.

DEPOTS ABROAD SOLICITED
WHERE NOT ALREADY COVERED
CARLTON WORKS, MANCHESTER 15, ENG.

placed on the market under names that have become well-known. A large number of the lesser-known salts of bromine and iodine have been introduced. Potassium bromate is being manufactured here competitively. Methyl stannic iodide, methyl stannic lactate and tin sulphur iodide are other products, and more recently bromoform and casein iodide have been put on the market. These are a few typical examples of the very wide range of medicinal products formerly obtained from foreign sources which are now being produced in bulk quantities by British manufacturers, and they are available to all overseas markets at prices which reflect the efficiency of the British industry.

PHARMACEUTICAL EXPORT GROUP

The Secretary-Manager of the Pharmaceutical Export Group contributes the following statement on the British Pharmaceutical Chemicals.

The primary function of the Group being to foster and increase the exports effected by the pharmaceutical industry, members have unceasingly directed their energies towards the accomplishment of this object, and are in a sound position to meet the needs of overseas buyers.

British manufacturers of pharmaceutical products, whether in the production of official preparations or their own specialities, have always set a high standard for the quality of their products, and it is their adherence to this standard, coupled with reasonable prices, which has earned for British pharmaceutical preparations the excellent reputation which they enjoy the world over, notwithstanding the keen attempts by other nationals, frequently subsidised, to oust the British manufacturer.

So intensive have been the efforts of British manufacturers that there are now available British equivalents for many of the pharmaceutical specialities previously obtained from Germany. Delivery is another factor to which attention is given by British exporters, and despite the call on manufacturers by the Government Services buyers can rely on receiving their requirements in reasonably good time.

To give a comprehensive list of the products available would require many pages of this supplement, but they include:—

Drugs Alkaloids
Medicinal and Pharmaceutical Specialities
Pharmaceutical Chemicals
Laboratory and Technical Chemicals
Biological Products
Food Products
Medicated Confectionery
Pills, Tablets, and Capsules

Simpkins
MEDICATED
LOZENGES

In 5 varieties

Pine Catarrh; T.C.L.
(Throat Chest and Lung);
Sore Throat; Friars
Balsam; Glycerine of
Thymol



Contain ACTIVE MEDICAMENTS in
an ENERGISING GLUCOSE BASE

ARE YOU STOCKING
VITA-GLUCOSE?

Write for full particulars with name of London
confirming house and area covered to—

A. L. Simpkin & Co. Ltd., Manufacturing Chemists,
Sheffield, 6

PERMAHEAT

ELECTRICALLY HEATED

BLANKETS

AND

PADS

All types for every need

PERMAHEAT

Export Dept.

FRIDAY STREET

MANCHESTER, England

PURFINOL**LIQUID**
PARAFFIN B.P.**PETROLEUM JELLIES****TECHNICAL**

White and Half-White OILS

All grades are available for prompt shipment
... packed to your requirements.

Enquiries invited.

Samples and Prices on Request

PURFINOL LIMITED

Brettenham House, Lancaster Place
STRAND, LONDON, W.C.2, Eng.

Cables: "INVATORE, LONDON."

Mention this Supplement when communicating with advertisers. It helps to identify you.

BRITISH MADE
CLINICAL THERMOMETERSTHE CHOICE
OF EXPERTSAlso Household,
Bath and Works
Thermometers**G.H.
ZEAL****LTD**
LOMBARD ROAD
MORDEN ROAD
LONDON**M. J. FECHER LTD.**

Makers of

"CUCKOO" PRODUCTS

HAVE FOR MANY YEARS
DEVOTED THEMSELVES TO
EXPORT TRADE AND ARE
CONTINUING TO DO SO
—THEY ARE KEEPING ALL
THEIR LINES GOING AND
INCREASING THEIR OUTPUT
IN MANY OF THEM.

**YOUR LONDON BUYER MAY RELY
ON US**

Works at:
10 DOD ST., LIMEHOUSE

Head Office and Works at:
**SLOUGH TRADING ESTATE
SLOUGH, BUCKS**

**BEAUTY PREPARATIONS
FOR THE TRADE**

From the experimental pound (or pint)
to the largest bulk order, you will find
no laboratory better equipped to supply
your needs. We supply either in bulk
or attractively packed ready for retail.
Write for price lists.

SCIENTIFIC PREPARATIONS LTD.
83 WESTBOURNE GROVE, LONDON, W.11

Have you got your copy of
**THE CHEMIST'S DICTIONARY
OF SYNONYMS?**

This entirely new edition incorporates Rouse's
Synonyms and contains thousands of synonym-
ous terms. It is a most useful book of reference.

Post free 5/4 from

**THE CHEMIST & DRUGGIST
THE PITMAN PRESS, BATH**

**EXPORT TRADE
GROUPS**

Pharmaceutical Export Group,
166 Piccadilly, London, W.1.

Fine Chemical Export Group,
166 Piccadilly, London, W.1.

**Perfumery and Toilet
Preparations Export Group,**
69 Cannon Street, London, E.C.4.

Proprietary Remedies Export Group,
43 Gordon Square, London, W.C.1.

**Surgical Dressings and Adhesive
Strappings Export Group,**
c/o Robinson & Sons (Chesterfield),
Ltd., Chesterfield, England.

**Surgical Instruments and
Appliances Export Group,**
6 Holborn Viaduct,
London, E.C.1.

Flavouring Essence Export Group,
Bridge House,
181 Queen Victoria Street,
London, E.C.4.

Comb Manufacturers Export Group,
21 Tothill Street,
London, S.W.1.

Edible Oil Export Group,
Unilever House,
Blackfriars,
London, E.C.4.

**Glue, Gelatine and Allied Export
Group,**
52 Lincoln's Inn Fields,
London, W.C.2.

Dyestuffs Export Group,
Hexagon House,
Blackley, Manchester.

**Pigment Colour Makers Export
Group,**
166 Piccadilly, London, W.1.

Lead Oxide Export Group,
1 Oxford Court,
Cannon Street, London, E.C.4.

White Lead Export Group,
1 Oxford Court,
Cannon Street, London, E.C.4.

Photographic Industry Export Group,
Dorland House,
Lower Regent Street,
London, S.W.1.

**Plastics Moulding Powder Export
Group,**
11-12 Pall Mall,
London, S.W.1.

Ophthalmic Optical Export Group,
69 Cannon Street,
London, E.C.4.

**Transparent Cellulose Wrapping
Export Group,**
Midland Bank Buildings,
Spring Gardens, Manchester.

THE WORLD'S BEST SELLER
FOR VARICOSE VEINS
AND OTHER LEG TROUBLES

**"ACADEMIC"
SURGICAL HOSE**

Made with the famous

"LASTEX" YARN
(TWO-WAY STRETCH)

Made also with rubberless cotton
yarn

FOR PARTICULARS & TERMS WRITE TO MAKERS:

"ACADEMIC" DEPOT
152-162 OXFORD ST., LONDON, W.1

SURGICAL RUBBER PRODUCTS*Ingram's*
LONDON.**HOT WATER BOTTLES**

CUSHIONS	BREAST BOTTLES
CORKS & BUNGS	SYRINGES for all
ENEMAS	purposes
GLOVES	TEATS
GAUNTLETS	TUBING

"SATINETTE" HOSPITAL SHEETING

Manufacturers of every description of
Rubber products for nearly 100 years.

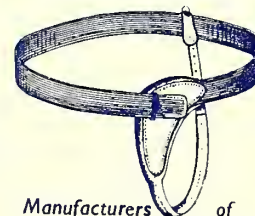
J. G. INGRAM & SON, LTD.

The London India Rubber Works
HACKNEY WICK, LONDON, E.9

Hewards
OF TWICKENHAM

Surgical Appliance Specialists
for a quarter of a century

As exporters we
have always been
and still are in an
ideal position to
make and supply
Trusses in large or
small quantities
either direct or
through a recog-
nised Shipping
House



Manufacturers of
**TRUSSES, BELTS
ETC.**

**The
R. H. Heward Co.**

CROWN ROAD WORKS
TWICKENHAM

Phone:
POPESGROVE 2243/4

Grams: BELTRUSS,
TWICKENHAM
M.C.



TABLET MACHINES

COATING PANS
GRANULATORS
MIXERS, DRUG MILLS
COMPACT PRESSES

From single punch to Rotary.
Output 90 to 1,500 per minute.

AUTOMATIC WATER STILLS

In 12 models, producing from
3 pints to 50 gallons of distilled
water per hour.

Please send for complete catalogue

MANESTY MACHINES Ltd.

SB SPEKE HALL RD., LIVERPOOL, ENGLAND

Cables: "Manesty," Liverpool

South African Agents:

MODERN PACKAGING (Pty.) LTD.
P.O. Box 5932, Johannesburg.



The solution to your MIXING problem!

Eliminate Hand Stirring



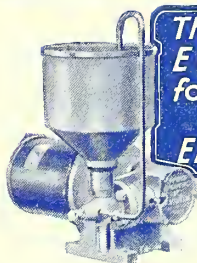
by installing our direct electrically
driven Portable Agitators. Easily
clamped to side of
vessel.

High and low speed
models in sizes from
10 gallons upwards to
suit sizes of vessels.

Write for details.

**MITCHELL
RAPID MIXING
and
STIRRING UNITS**

L. A. MITCHELL LIMITED
37 PETER STREET • MANCHESTER



**The Q.P. power
EMULSIFIER
for rapid and
stable
Emulsification**

Output 20/25 galls. per
hour or will handle small
quantities

This British made power emulsifier is
complete with electric motor, or can
be arranged for belt drive. It provides
rapid and stable emulsification of solu-
tions containing gum, oil and other
ingredients difficult to mix. All working
parts are of stainless steel or anti-
corrosive alloys, to withstand normal
chemical action, easily cleaned after use.
Write for particulars and prices.

ORMEROD ENGINEERS LTD.
ROCHDALE - - - ENGLAND

"THE C. & D." EXPORT INQUIRY DEPARTMENT

For many years the *Chemist and Druggist* Inquiry Department has been well known at home and abroad as a reliable source from which to obtain information as to sources of supply. The department has been built up year by year, and consists of many thousands of indexed references of manufacturers and exporters of products and articles of all branches of the chemical and allied industries.

These records, to which are added each week details of all new products placed on the market and changes in distributing channels, etc., comprise an up-to-date and comprehensive register which is in constant use for the purpose of answering inquiries for sources of supply from all parts of the world. It is a service which is unique in journalism connected with the British chemical and allied trades and industries, and the facility is provided free of charge to overseas buyers throughout the world.

Inquiries from overseas buyers will receive immediate attention, and full details of the names of manufacturers and exporters of any British products of the classes of goods briefly referred to in this Supplement will be gladly forwarded on request. Whether it be pharmaceutical, chemicals, medical specialities, cosmetics or toilet preparations, perfumery, druggists' sundries, tablets or pills, or any one of the thousands of products and articles of the trade, the Export Inquiry Department of the *Chemist and Druggist* can furnish the sources of supply. Inquiries should be addressed to:—

The Chemist and Druggist,
Export Inquiry Department,
28 Essex Street,
Strand,
London, W.C.2.

BUY BRITISH

USED...and COMMENDED

in Africa and Argentina, in New Zealand, Russia, India and many other countries.



GARDNER

Wm. GARDNER & Sons
(GLOUCESTER) LTD.
Bristol Road
Gloucester
Cables: "Gardner
Gloucester"

STREAMLINED

Combined patent "Rapid"

SIFTERS & MIXERS

SPECIALISTS in the manufacture of TABLETS and PILLS

TO STANDARD OR SPECIAL FORMULÆ

Also the following Specialities:

- 'C.L.' HALIBUT LIVER OIL Tablets
- 'PARALACT' for Chilblains
- 'BELSAM' Haemorrhoidal Ointment
- 'CURACNE' Tin Compound Tablets
- 'NETTO' The Dry Cleaner
- 'HEART SHAPE' Digestive Tablets
- 'C.L.' LYSOL
- 'C.L.' IRON AND YEAST Tablets
- PINE TREE LOZENGES

THE COOPER LABORATORY
WATFORD, ENG.



CARNEGIE CHEMICALS
(WELWYN) LTD.

MANUFACTURERS OF:—

- BISMUTH SALTS
- CAFFEIN SALTS
- CHRYSAROBIN
- EPHEDRIN & SALTS
- QUININE SALTS

ENQUIRIES THROUGH:

CARNEGIE BROS. LTD.
WELWYN GARDEN CITY

Mention this Supplement when communicating with advertisers. It helps to identify you.

Printed and Published for the Proprietors by THE PITMAN PRESS, Lower Bristol Road, Bath, and Published weekly by the Proprietors,

194

d
E

New
many

E

IXE

Æ

ts

ent
ets

ts

FOR

LS

y

